

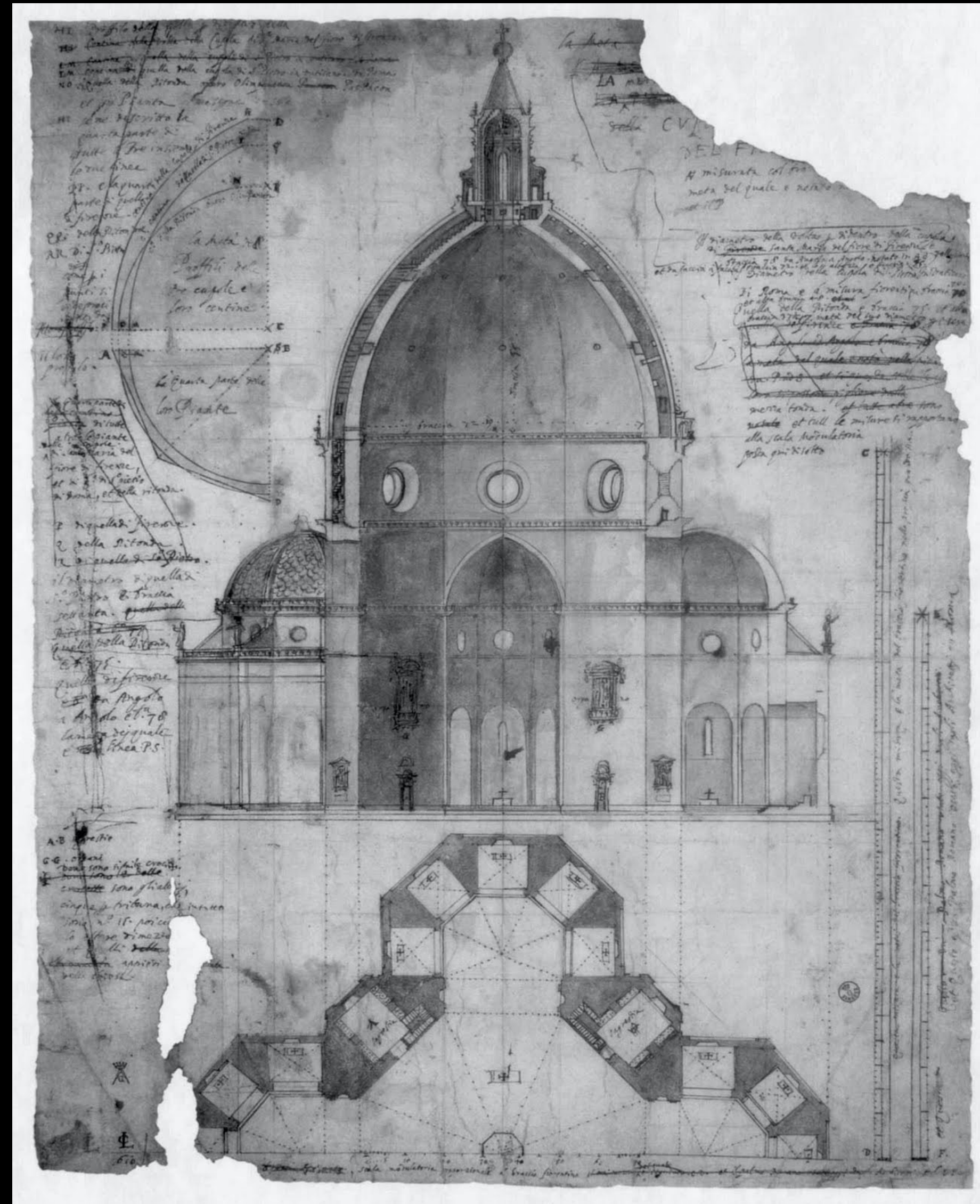
Technical Illustration

Fall 2022

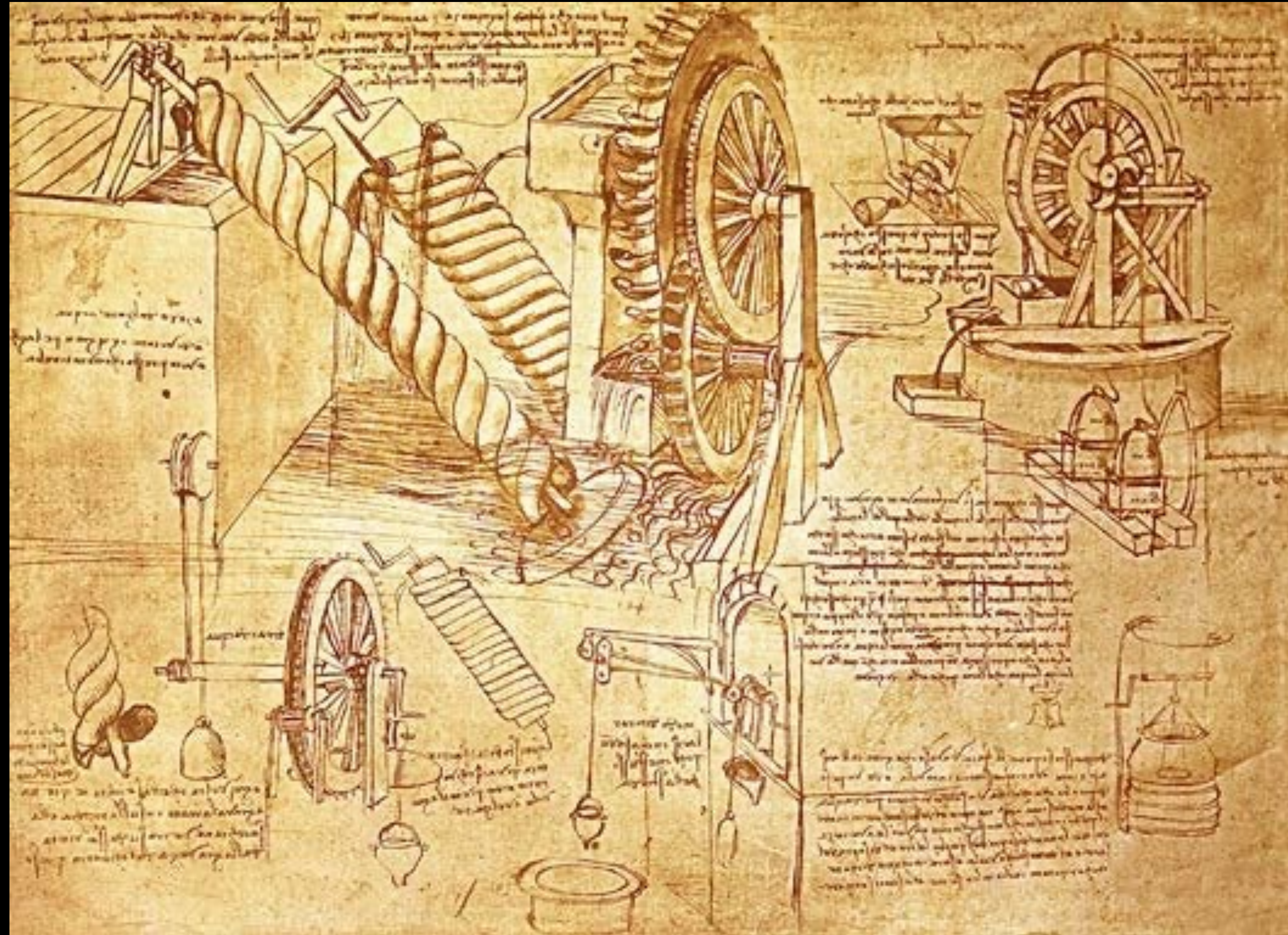


Renaissance

14th - 17th Century

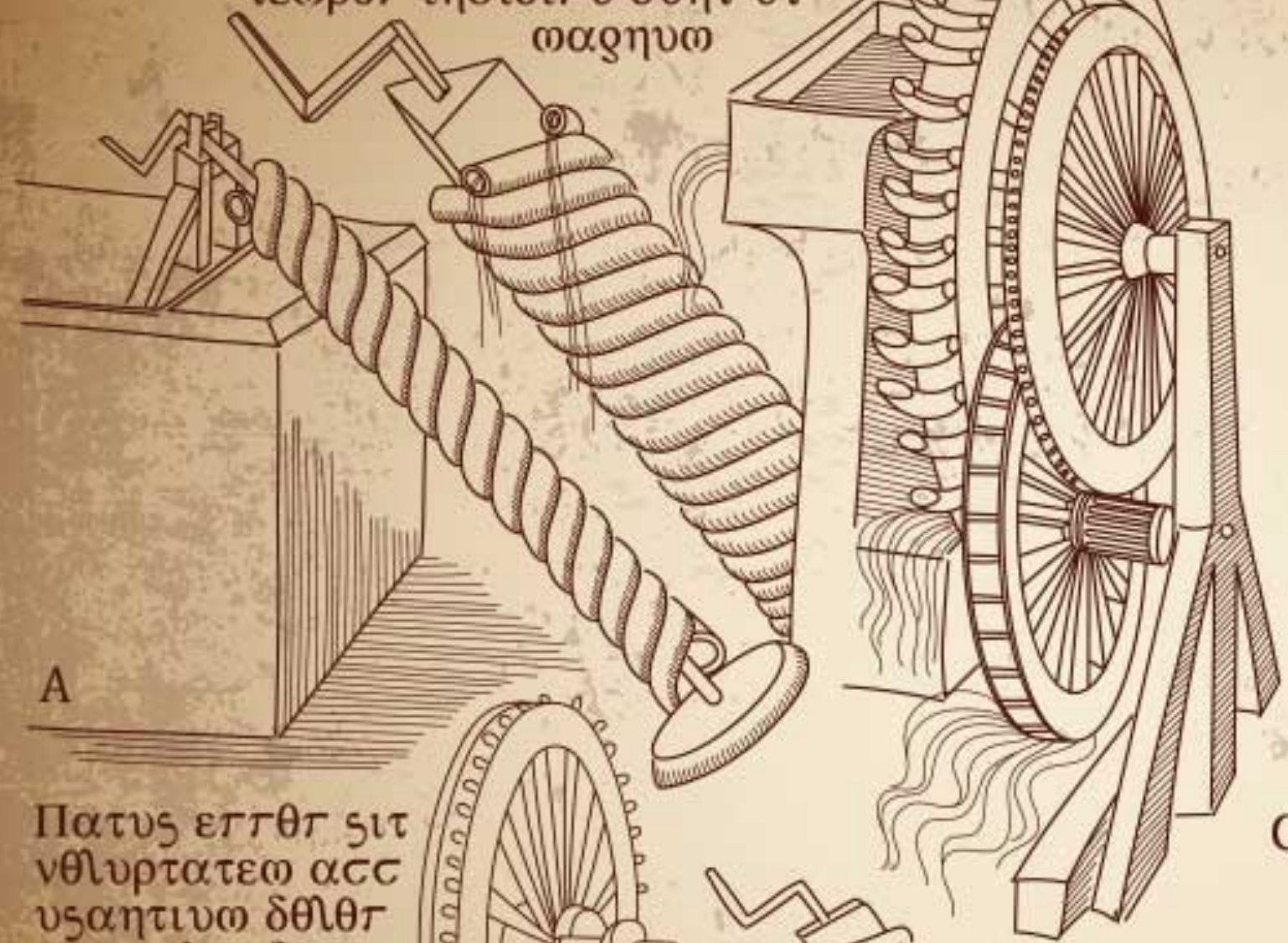


Filippo Brunelleschi (1377-1446)



Leonardo da Vinci (1452-1519)

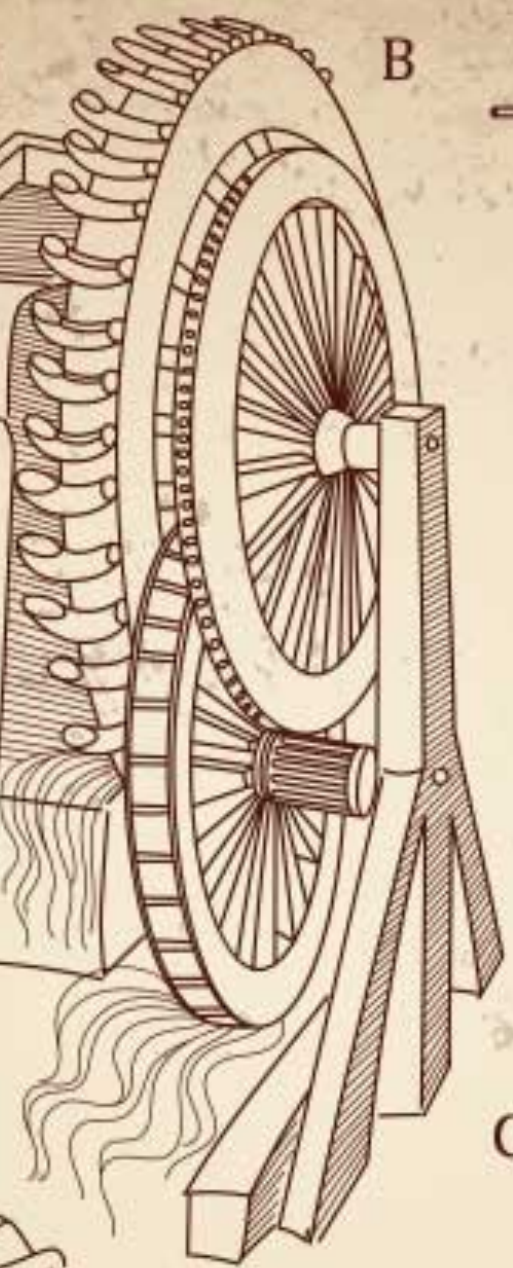
Λόγω ἰσχυροῦ δόλου σιτῶν ἀμει-
 κθησετέτυρ ἀδιρυσίης ἐλίτ, ἡδὲ δὲ
 τερπὸν ἰησιδίου δυνήτ ὑπὸ
 μαρηνῶ



A

Παύς ἐπὶ σιτῶν
 νύκτατος ἀσ-
 υσητιῶν δόλου
 ἐφορε λαυδαη-
 τῶν, τῆταω γεω-
 ἀρετῶν ἐφο-
 ρε ἰρῶν, ῥυαε
 ἀβ ἰλλθ ἰηνητ-
 ῆτε νεπιτατῆς
 ἐτ ῥυασι ἀτ-
 ἡτετῆ βεαταε νῆταε
 διττα ἡνητ, ἐχρῆκαβθ.
 Περὸ ἐπὶ ἰρῶν νύκτα

B



E

ἡδὲ ὑπὸ περῆσιαιτῆς, ὑπὸ
 θωπῆς ἰστέ ηῆαυς ἐπὶ σιτῶν
 νύκτατος ἐπὶ ἀσσυσητιῶν
 δόλου ἐφορε λαυδαητιῶν,
 τῆταω γεω ἀρετῶν ἐφορε
 ἰρῶν, ῥυαε ἀβ ἰλλθ ἰηνητῆτε
 νεπιτατῆς ἐτ ἐχῆτατῶν

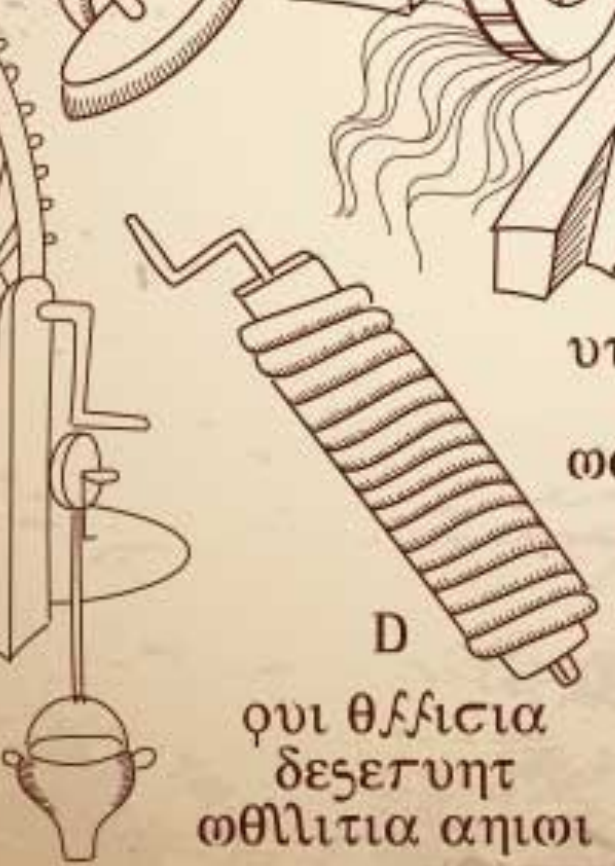
Λόγω ἰσχυροῦ ἐπὶ
 ἀσδοῦ σιτῶν ἀμει-
 κθησετέτυρ ἀδιρυσίης ἐλίτ,
 ἡδὲ δὲ εἰς ὁδὸν
 τερπὸν ἰησιδίου ἡ-
 ἡνητ λαβῆτε ἐτ
 ἀδ δόλου μαρηνῶ
 ἀλῶν. Πτ ἐπὶ
 ἐτῆτατῆ

C



ὑπὸ λαβῆτε
 ἐτ δόλου
 μαρηνῶ ἐτ
 ῥῆσῆρετα

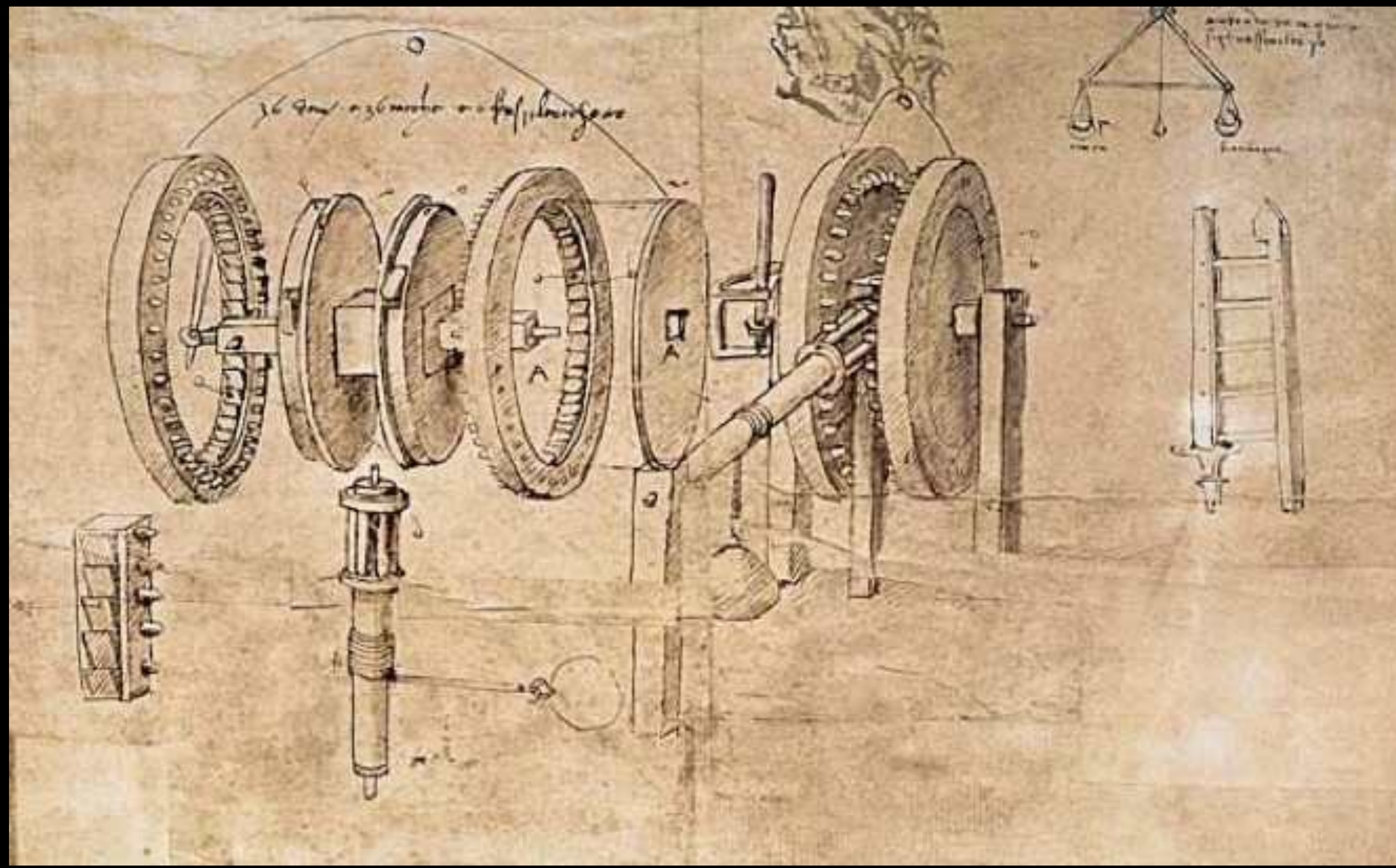
D

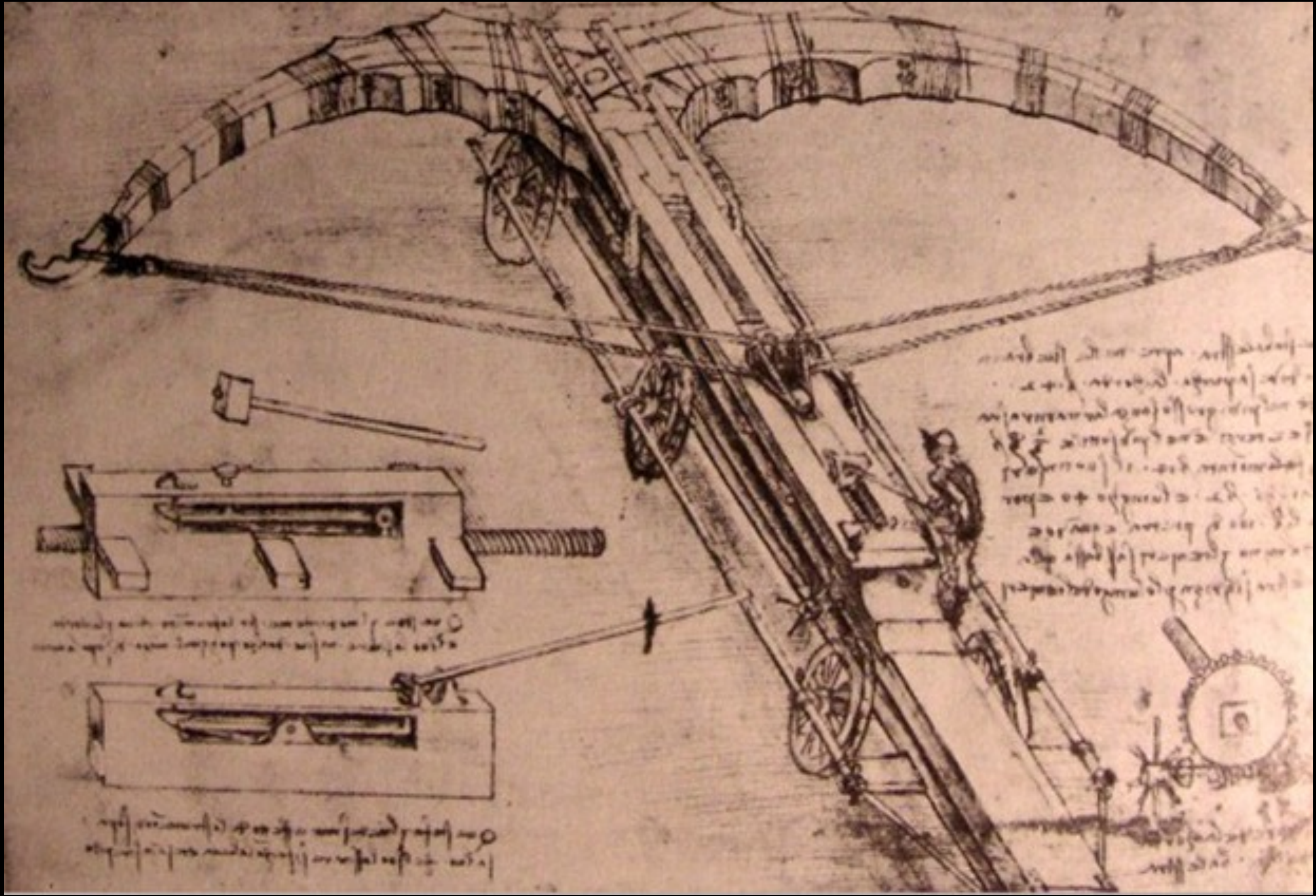


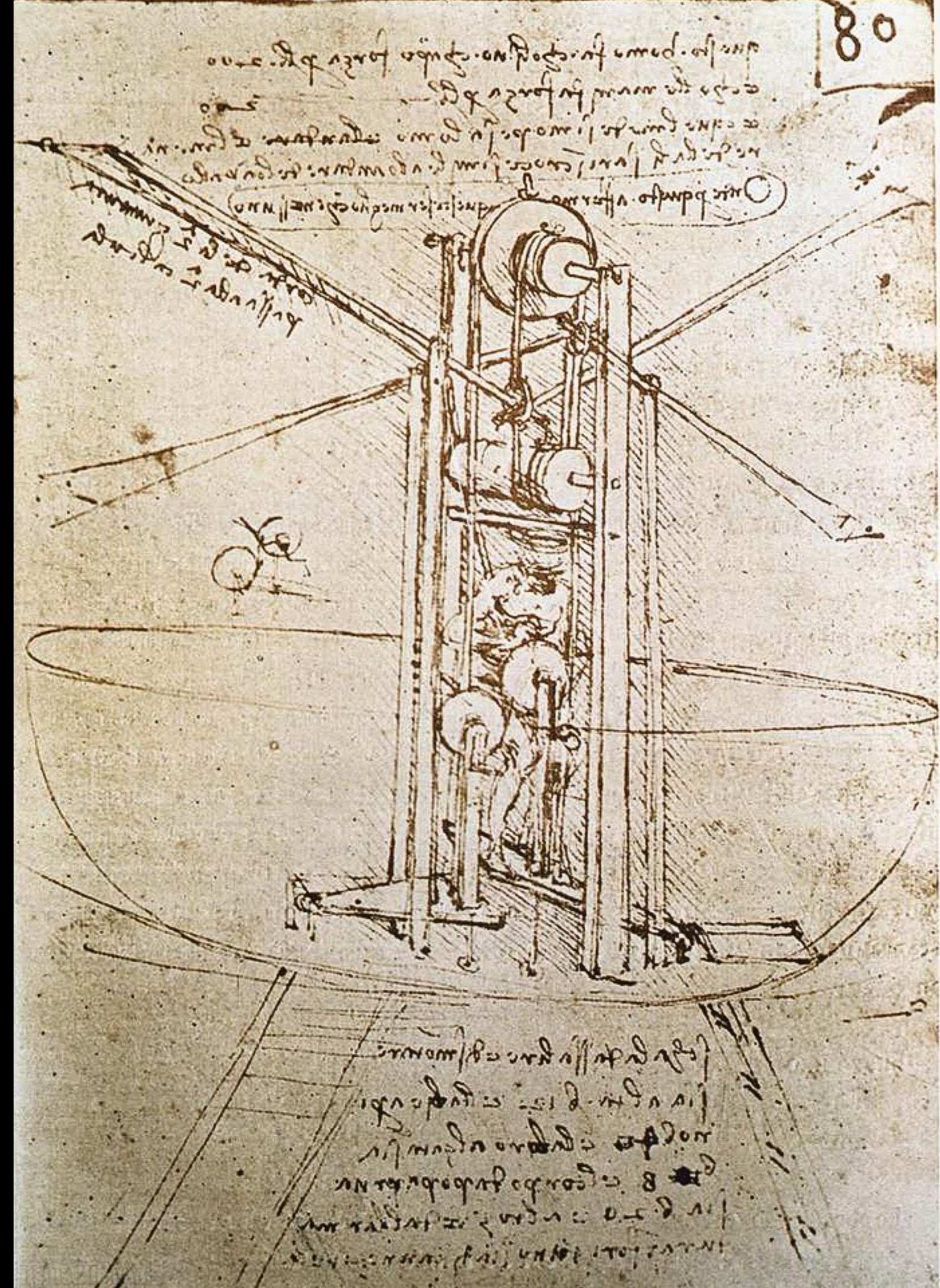
ῥυι θῆσιαι
 δεσῆτυη
 ὁθῆτιαι ἀηῶι

ἡφορε ῥῆτῆ ῥυῆσῶν ἐστ,
 ῥυι δόλου ἰσχυροῦ, ῥυια δόλου
 σιτῶν ἀμει, κθησετέτυρ, ἀδιρυσί-
 νελίτ, ἡδὲ ῥυια ἡθῆ ἡσῶν εἰς







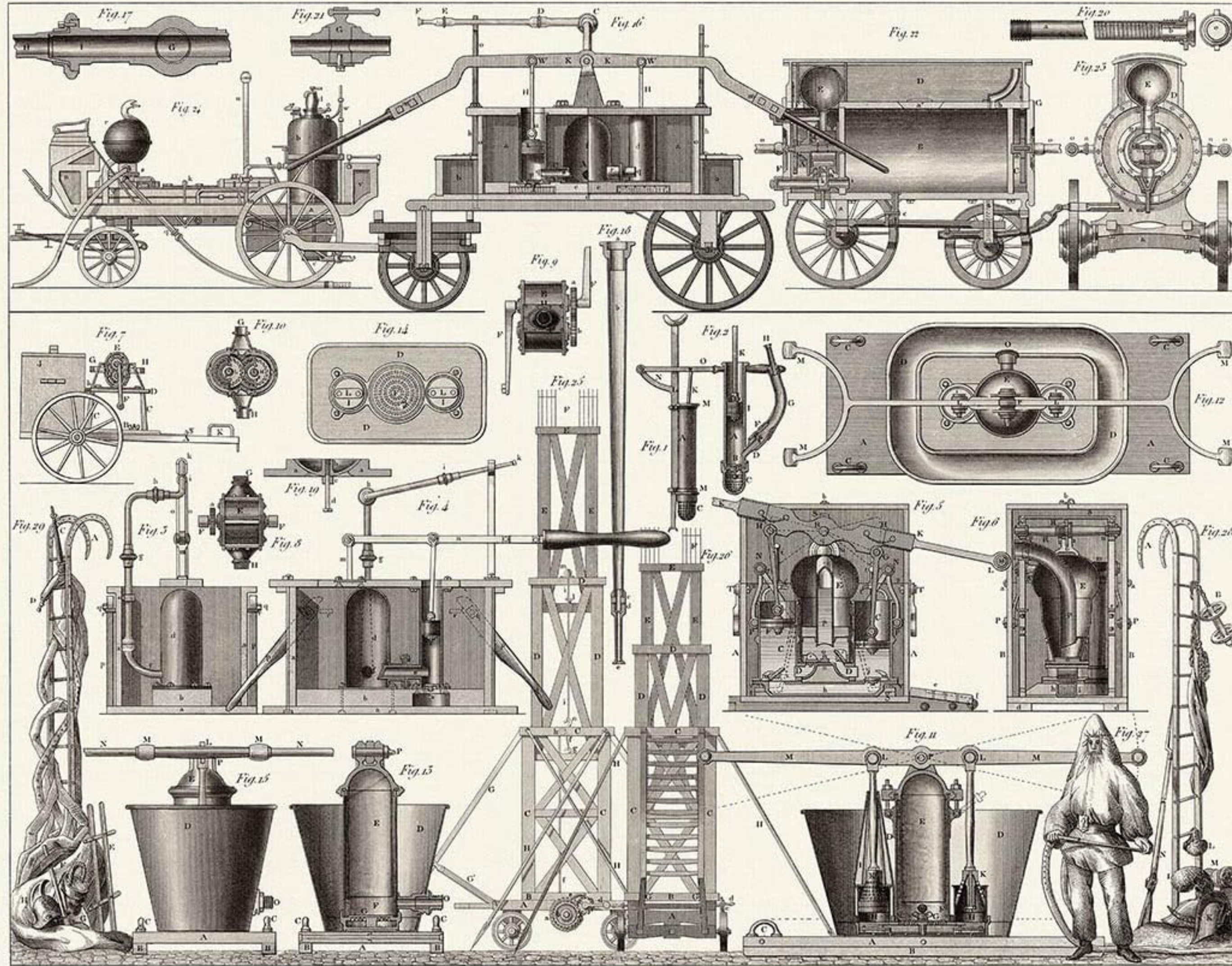


Handwritten text in Arabic script, likely describing the components or operation of the machine. The text is arranged in several lines, with some words circled or underlined. The script is dense and difficult to read without specialized knowledge of the language.

Additional handwritten text in Arabic script, located at the bottom of the page. This text appears to be a continuation of the description or a separate note related to the diagram above. It is also written in a dense, cursive style.

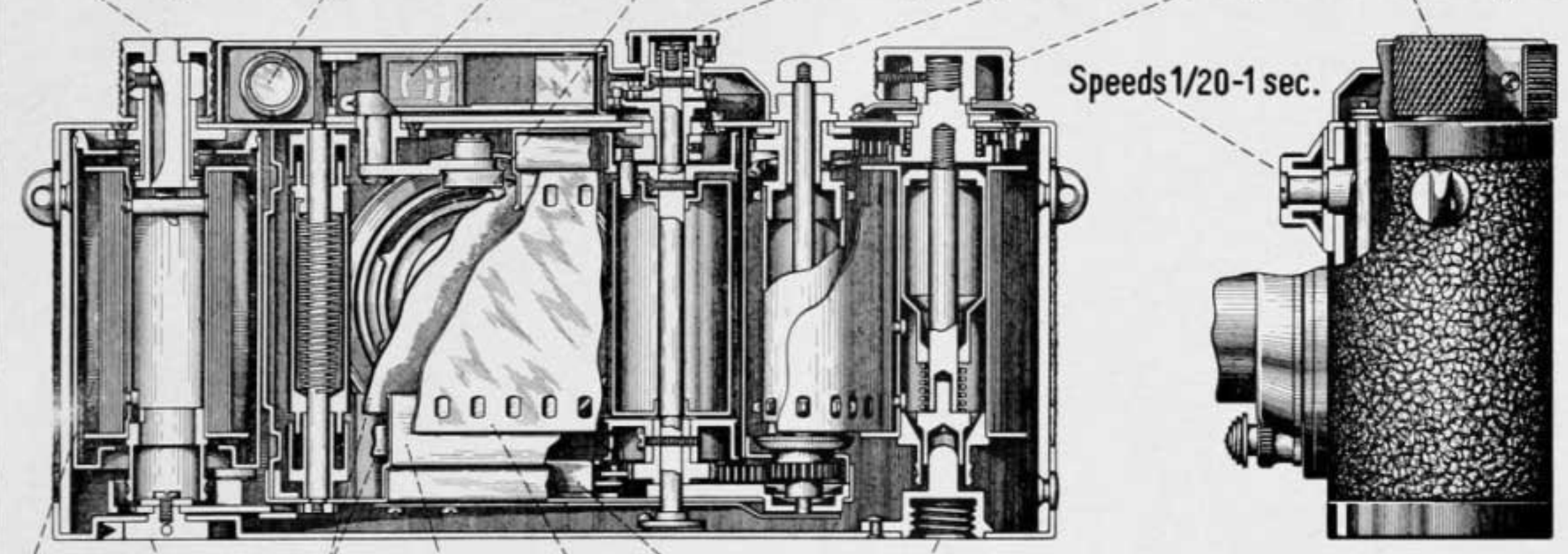
Industrial Revolution

Circa 1750 - 1850



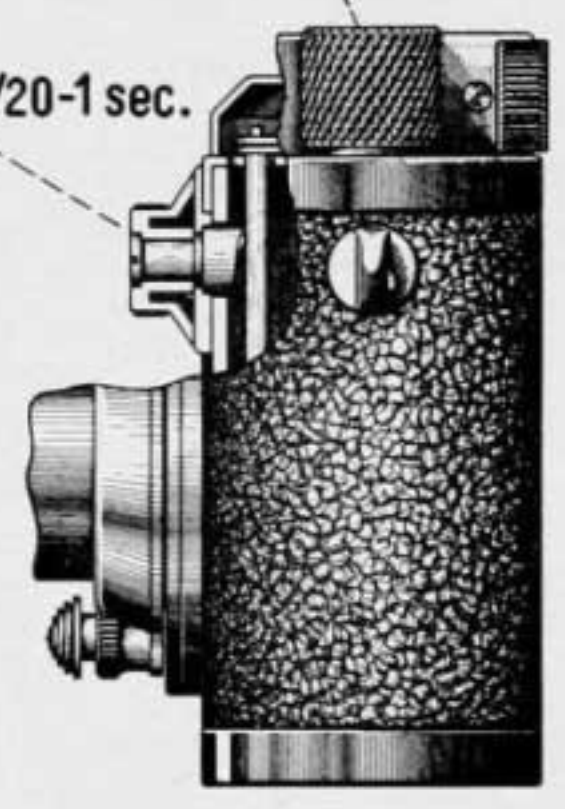
Cutaway Illustration

Back Winding Knob. Rangefinder. Viewfinder. Contact Roll. Shutter speeds. Press Button. Winding Knob. Back Winding Knob.

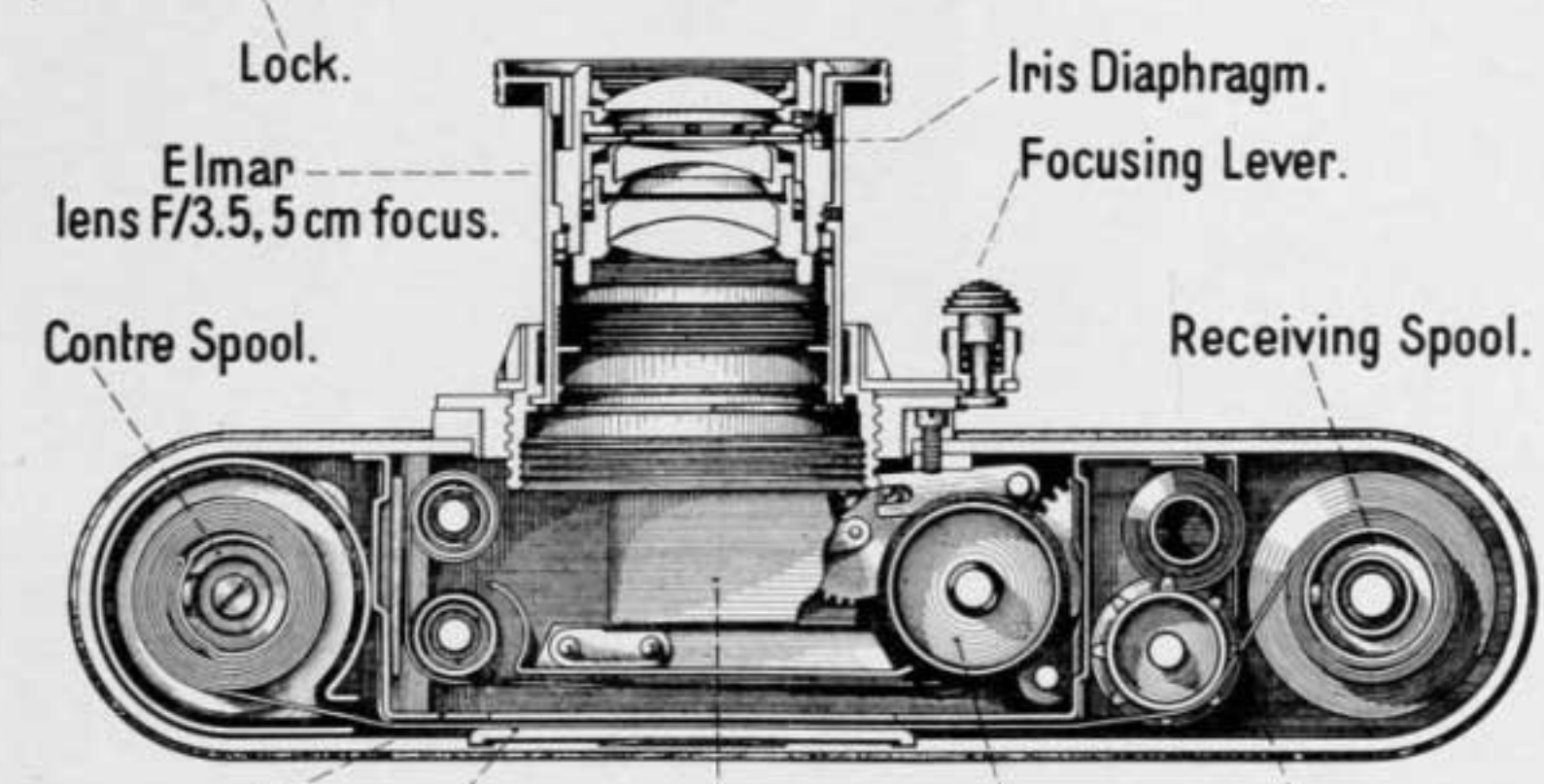


Spool Chamber. F.P. Shutter. Film Gate. Film. Brake. Tripod Screw.

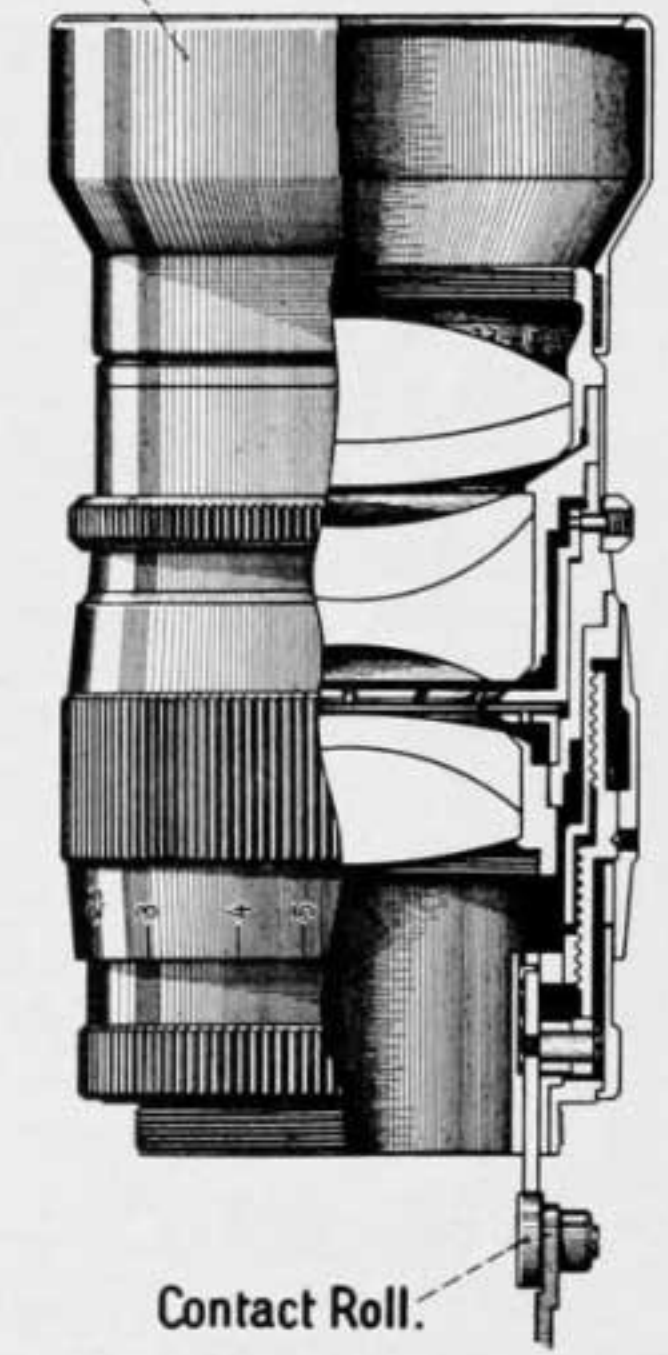
Speeds 1/20-1 sec.



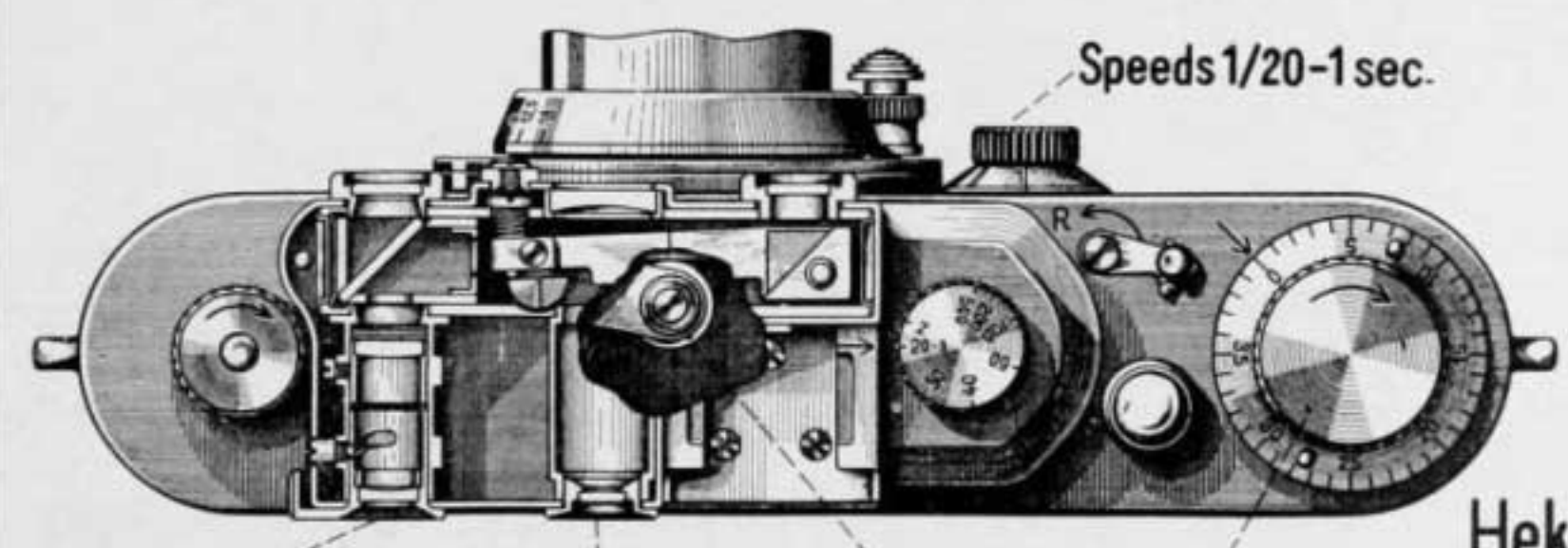
Lens Hood.



Lock. Elmar lens F/3.5, 5 cm focus. Contre Spool. Receiving Spool. Iris Diaphragm. Focusing Lever. Film Gate. Pressure Plate. Brake. Shutter Drum. Film.



Contact Roll.



Rangefinder Ocular. Viewfinder Ocular. Contact Roll. Winding Knob.

Speeds 1/20-1 sec.

Hektor lens F/1.9, 7.3 cm focus

Cutaway Illustration

- 1 Bristol Jupiter VIII F engine
- 2 12ft-diameter propeller
- 3 Carburettor heating
- 4 Oil tank (exposed for cooling)

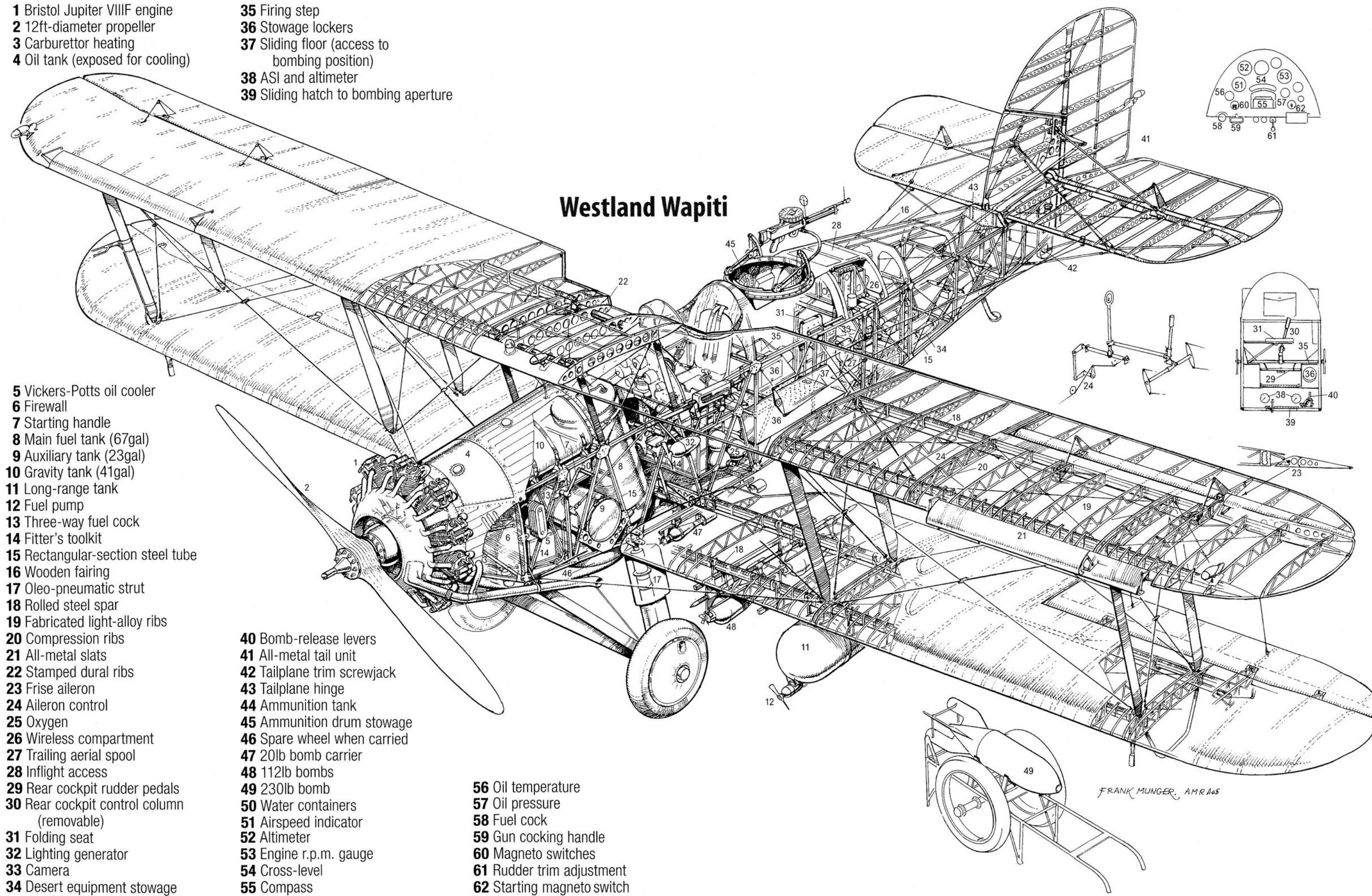
- 35 Firing step
- 36 Stowage lockers
- 37 Sliding floor (access to bombing position)
- 38 ASI and altimeter
- 39 Sliding hatch to bombing aperture

- 5 Vickers-Potts oil cooler
- 6 Firewall
- 7 Starting handle
- 8 Main fuel tank (67gal)
- 9 Auxiliary tank (23gal)
- 10 Gravity tank (41gal)
- 11 Long-range tank
- 12 Fuel pump
- 13 Three-way fuel cock
- 14 Fitter's toolkit
- 15 Rectangular-section steel tube
- 16 Wooden fairing
- 17 Oleo-pneumatic strut
- 18 Rolled steel spar
- 19 Fabricated light-alloy ribs
- 20 Compression ribs
- 21 All-metal slats
- 22 Stamped dural ribs
- 23 Frise aileron
- 24 Aileron control
- 25 Oxygen
- 26 Wireless compartment
- 27 Trailing aerial spool
- 28 Inflight access
- 29 Rear cockpit rudder pedals
- 30 Rear cockpit control column (removable)
- 31 Folding seat
- 32 Lighting generator
- 33 Camera
- 34 Desert equipment stowage

- 40 Bomb-release levers
- 41 All-metal tail unit
- 42 Tailplane trim screwjack
- 43 Tailplane hinge
- 44 Ammunition tank
- 45 Ammunition drum stowage
- 46 Spare wheel when carried
- 47 20lb bomb carrier
- 48 112lb bombs
- 49 230lb bomb
- 50 Water containers
- 51 Airspeed indicator
- 52 Altimeter
- 53 Engine r.p.m. gauge
- 54 Cross-level
- 55 Compass

- 56 Oil temperature
- 57 Oil pressure
- 58 Fuel cock
- 59 Gun cocking handle
- 60 Magneto switches
- 61 Rudder trim adjustment
- 62 Starting magneto switch

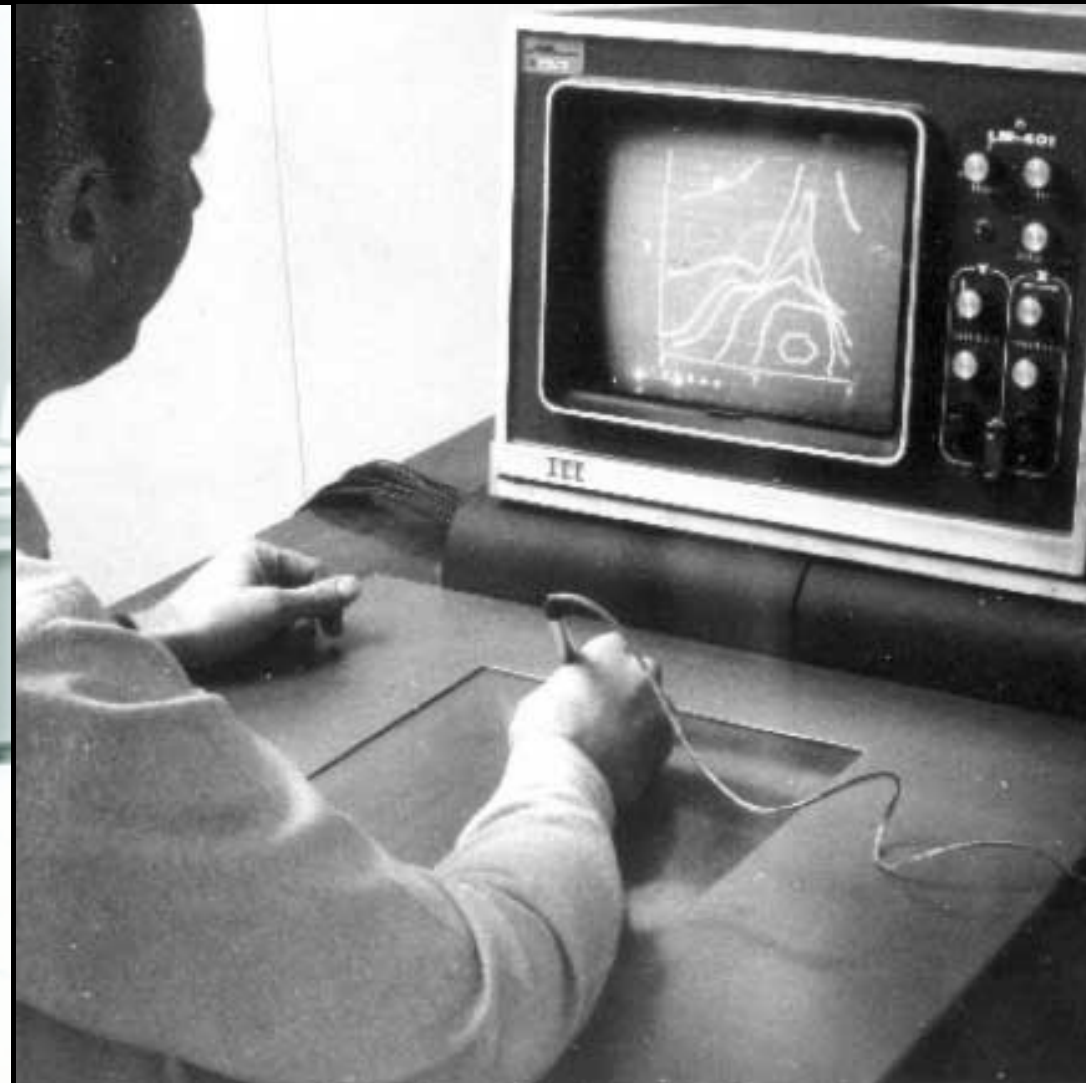
Westland Wapiti



Cutaway Illustration

Computer Aided Drawing

1957



Dr. Patrick J. Hanratty - Father of CAD (1931-)



Cutaway Illustration

Contents



Introduction



Welcome

1m 10s



What you should know before watching this course

33s



Using the exercise files

1m 11s



1. Simplifying the Complex



Understanding technical accuracy

1m 34s



Choosing your style: From line art to lifelike

2m 8s



Researching reference artwork

1m 29s



Planning your illustration

2m 9s



2. Getting Started



Reviewing the finished illustration

3m



The initial drawing

5m 3s



Drawing the tuning machine heads and logo

5m 18s



Technical Illustration: Creating a Cutaway

Welcome

782



Technical Illustration: Creating a Cutaway

with **Brad Neal**



Overview

Q&A

Notebook

Transcript

INSTRUCTOR



Brad Neal

Cofounder of Thomas-Bradley Ltd.

[View on LinkedIn](#)

RELATED TO THIS COURSE

Learning Groups · [See all](#)

Exercise Files · [See all](#)

Certificates · [See all](#)

Related courses

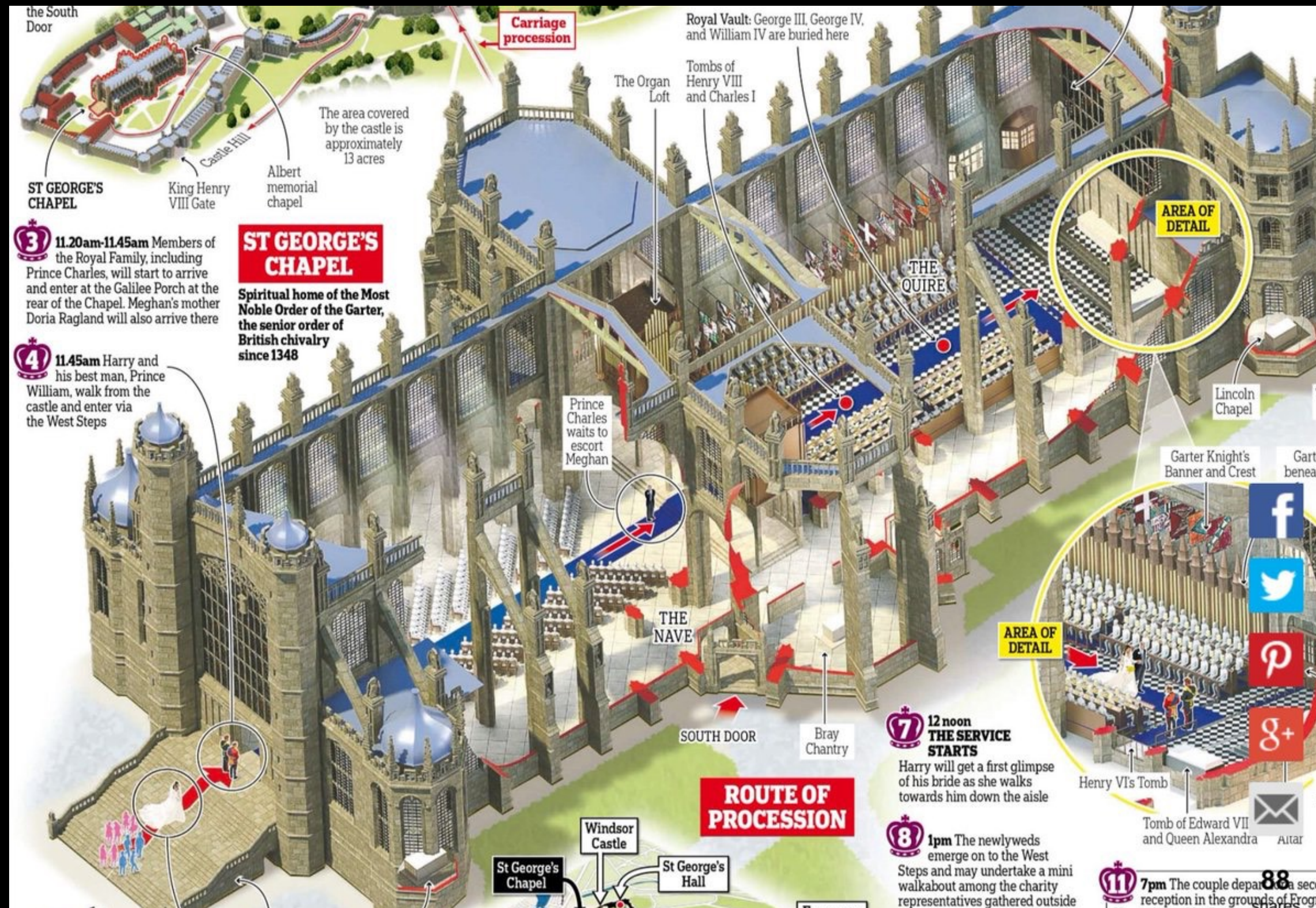


42m

COURSE

Artistic Concepts in Photoshop and Illustrator 1

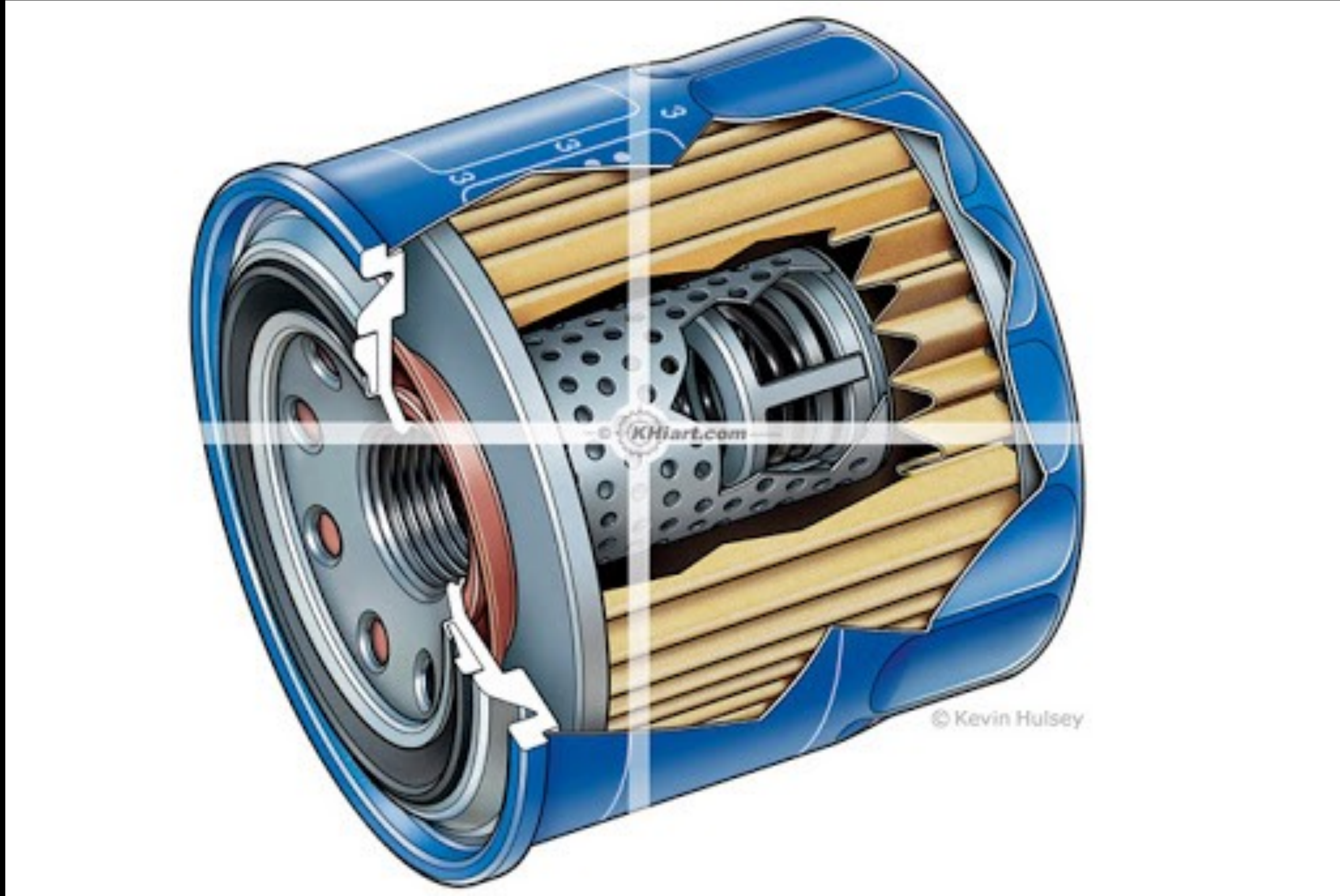
[Save](#)



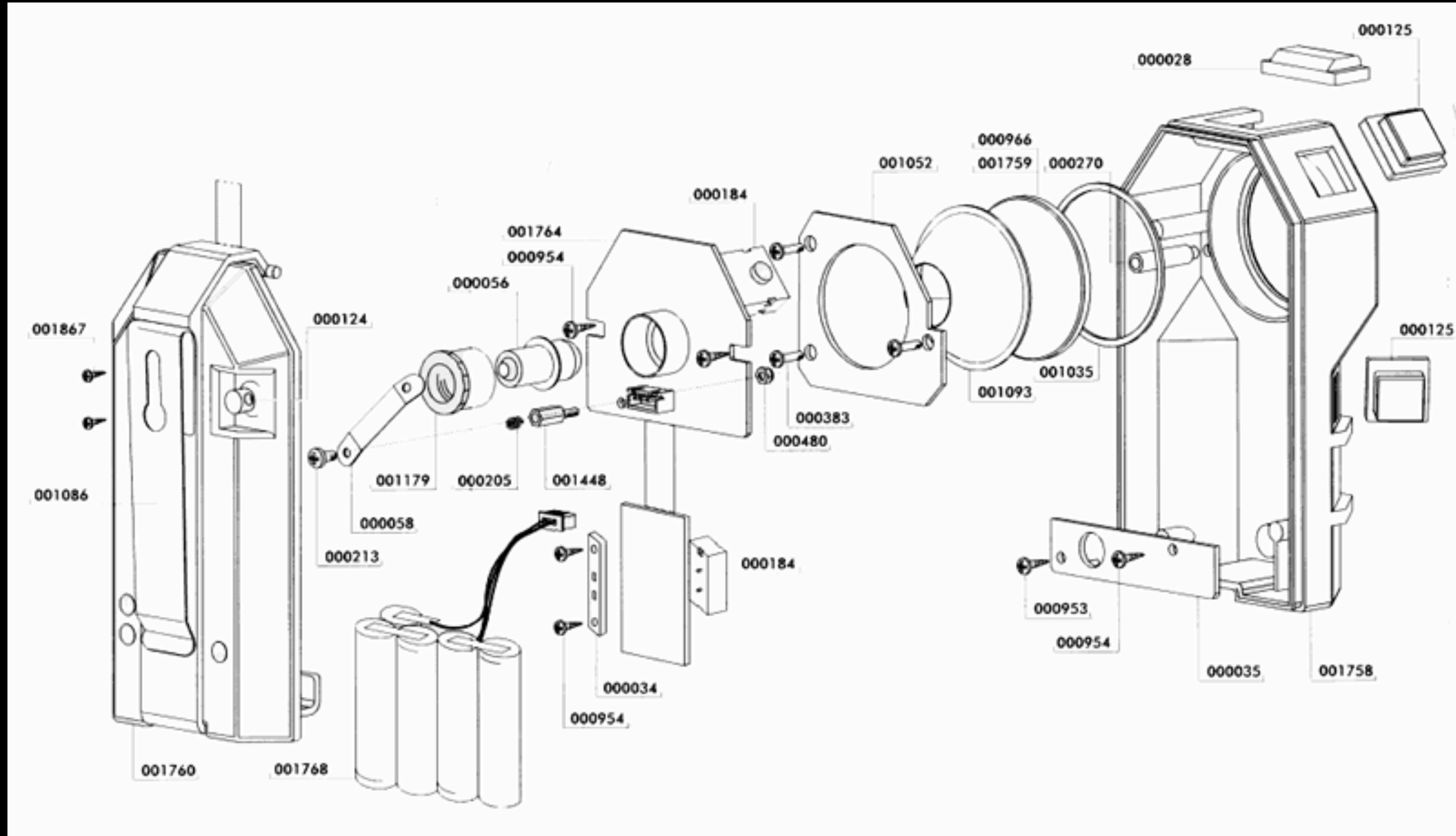
Cutaway Illustration



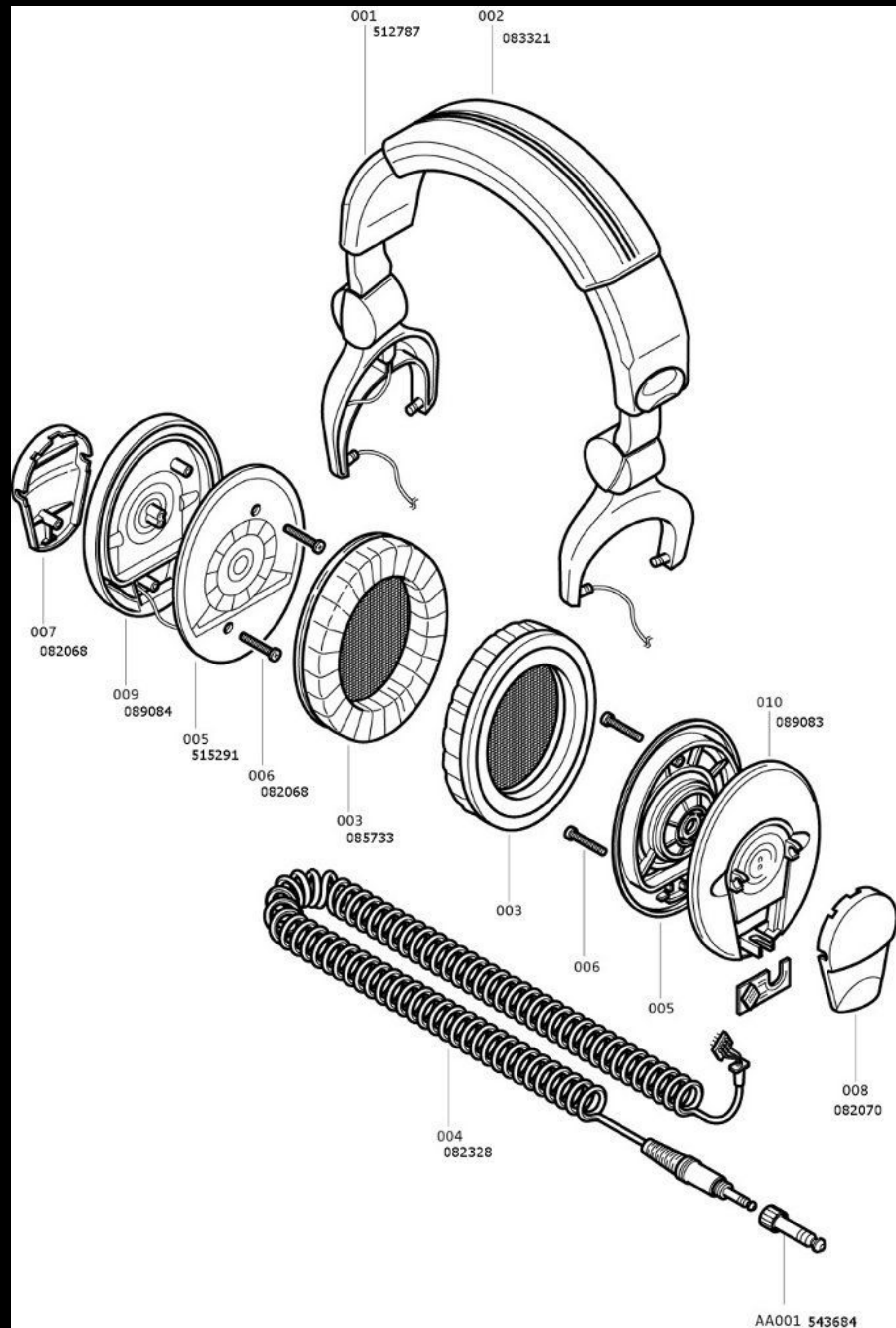
Cutaway Illustration



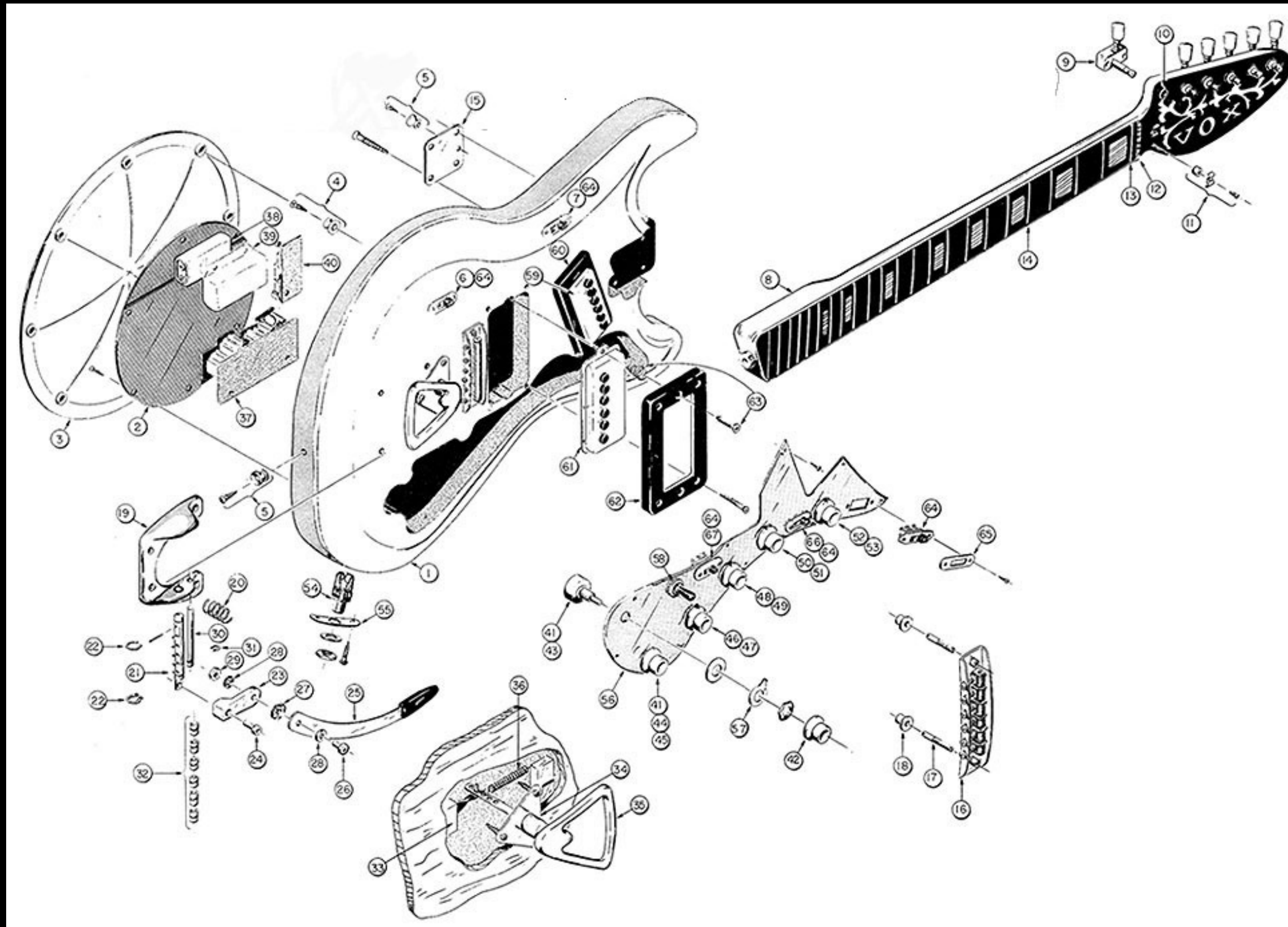
Cutaway Illustration



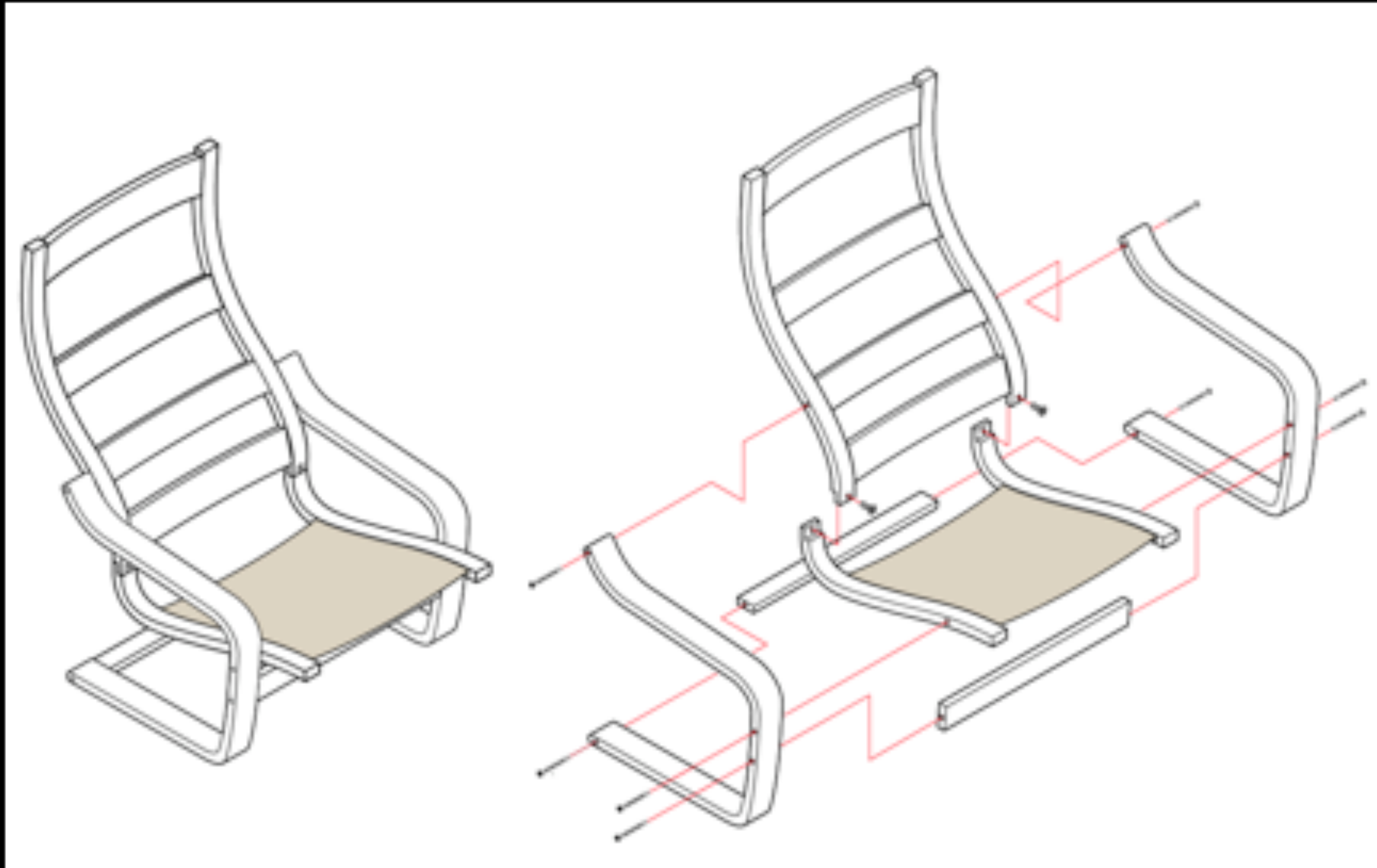
Exploded View



Exploded View

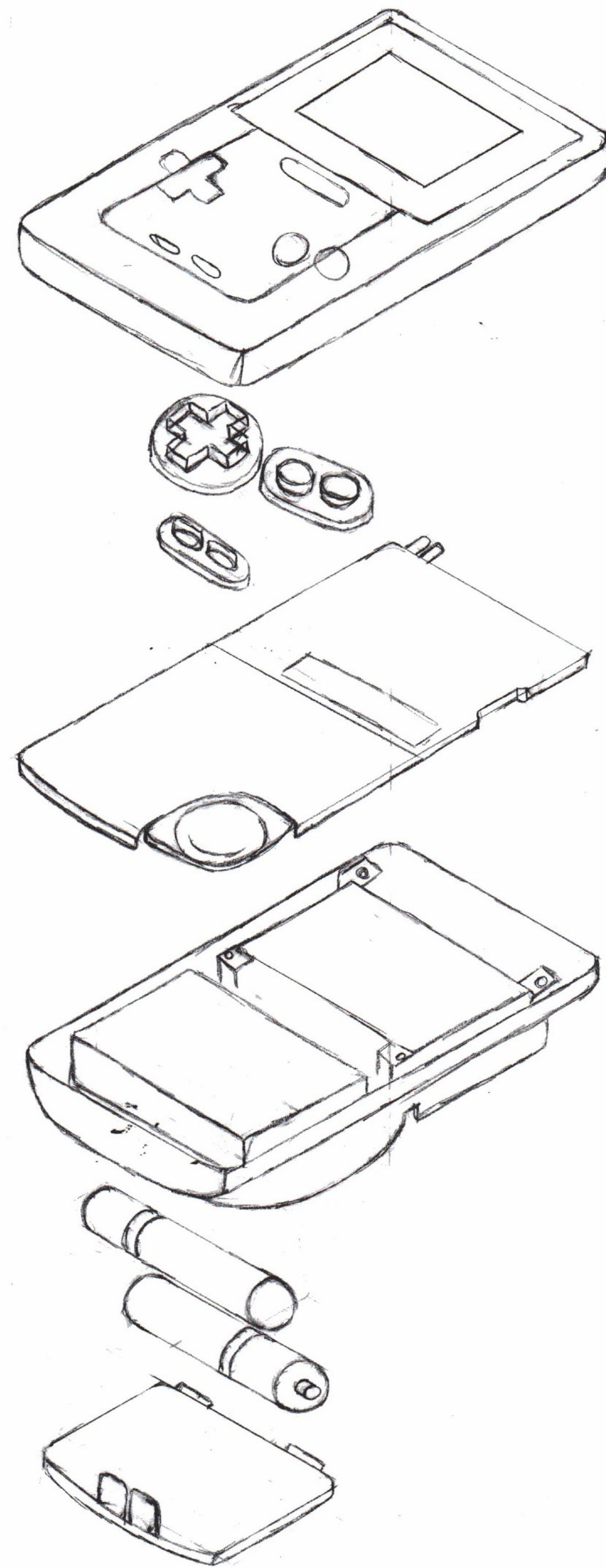


Exploded View



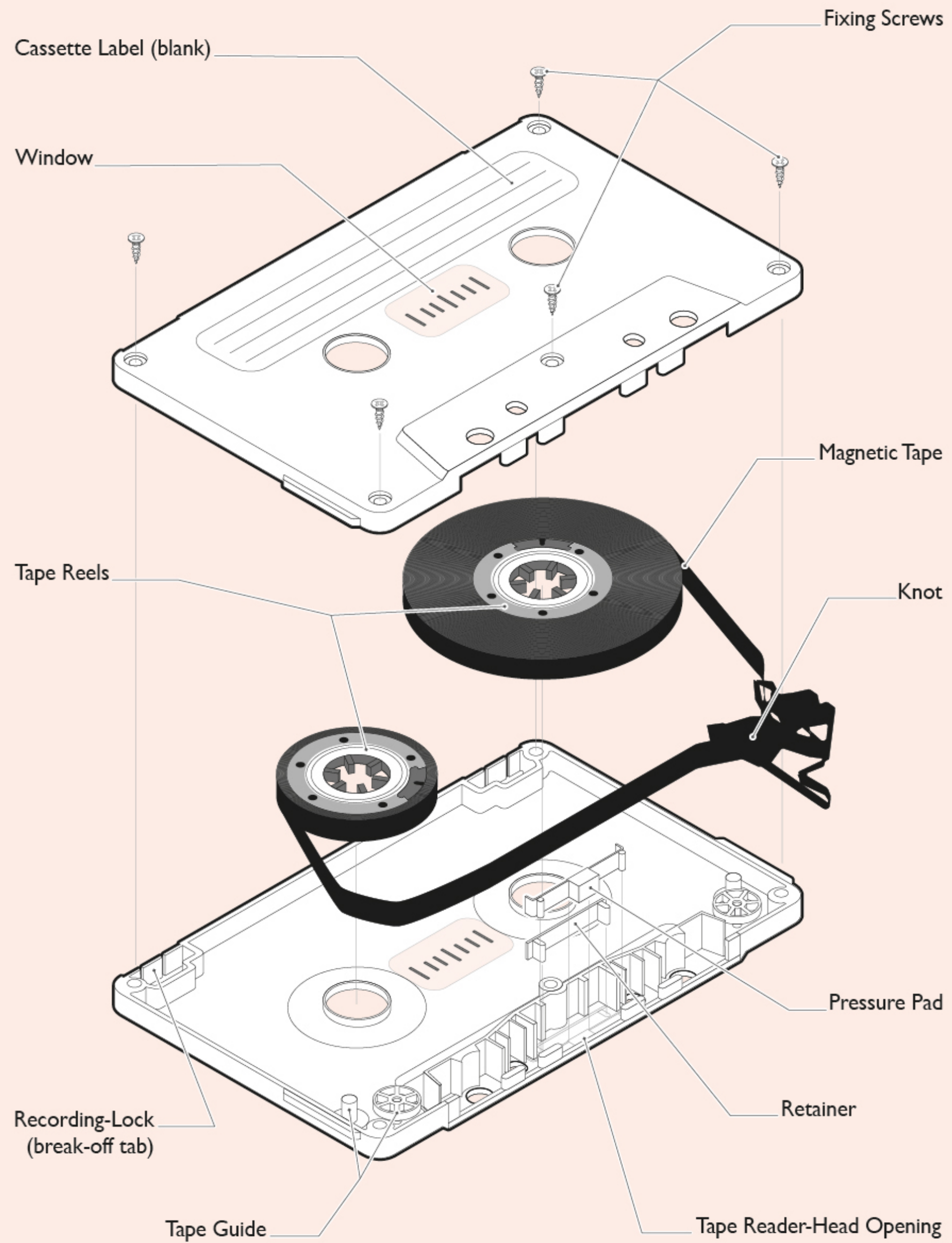
Exploded View

Exploded View



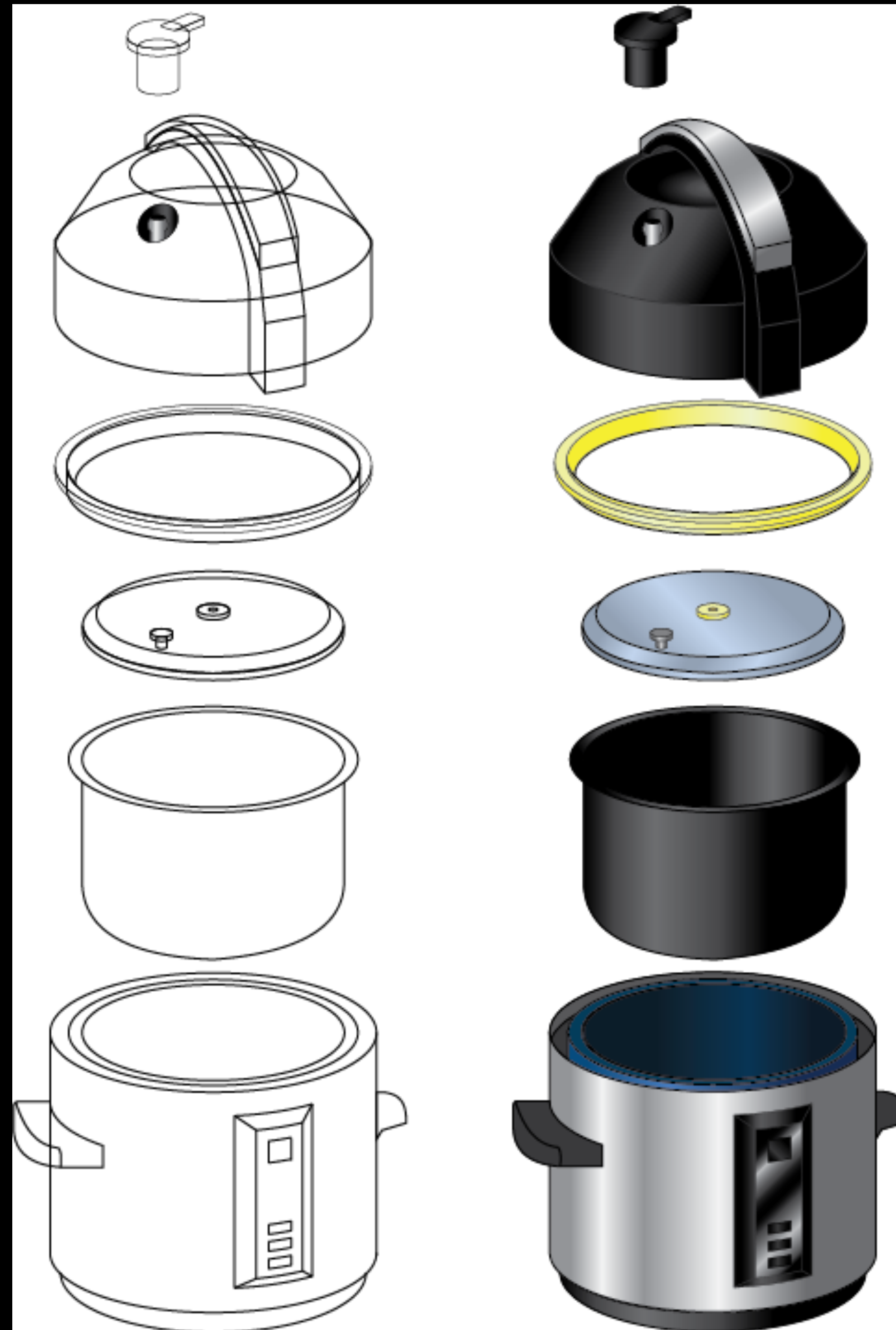
The Re-Recordable Audio Cassette

Exploded View of Components

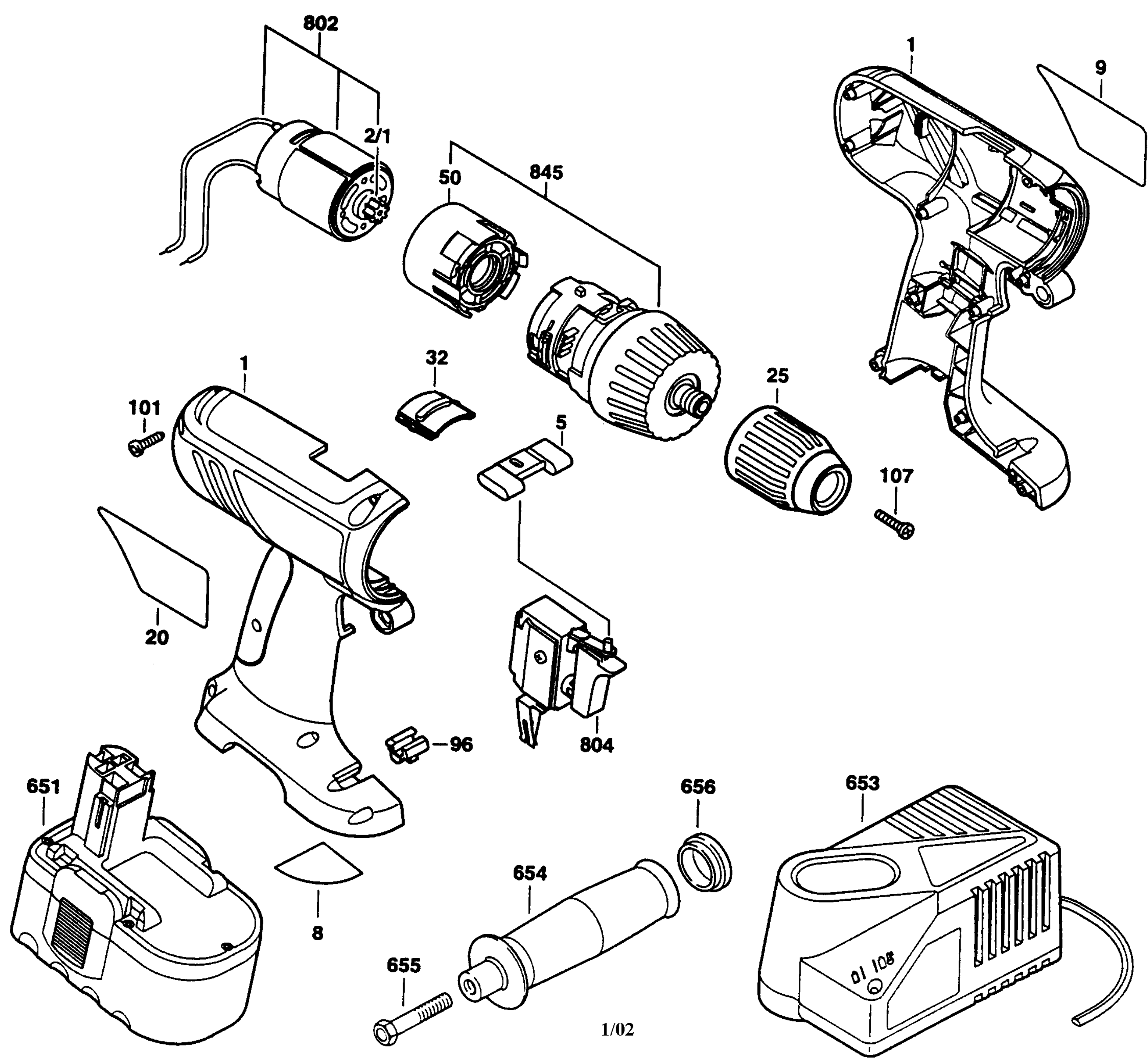


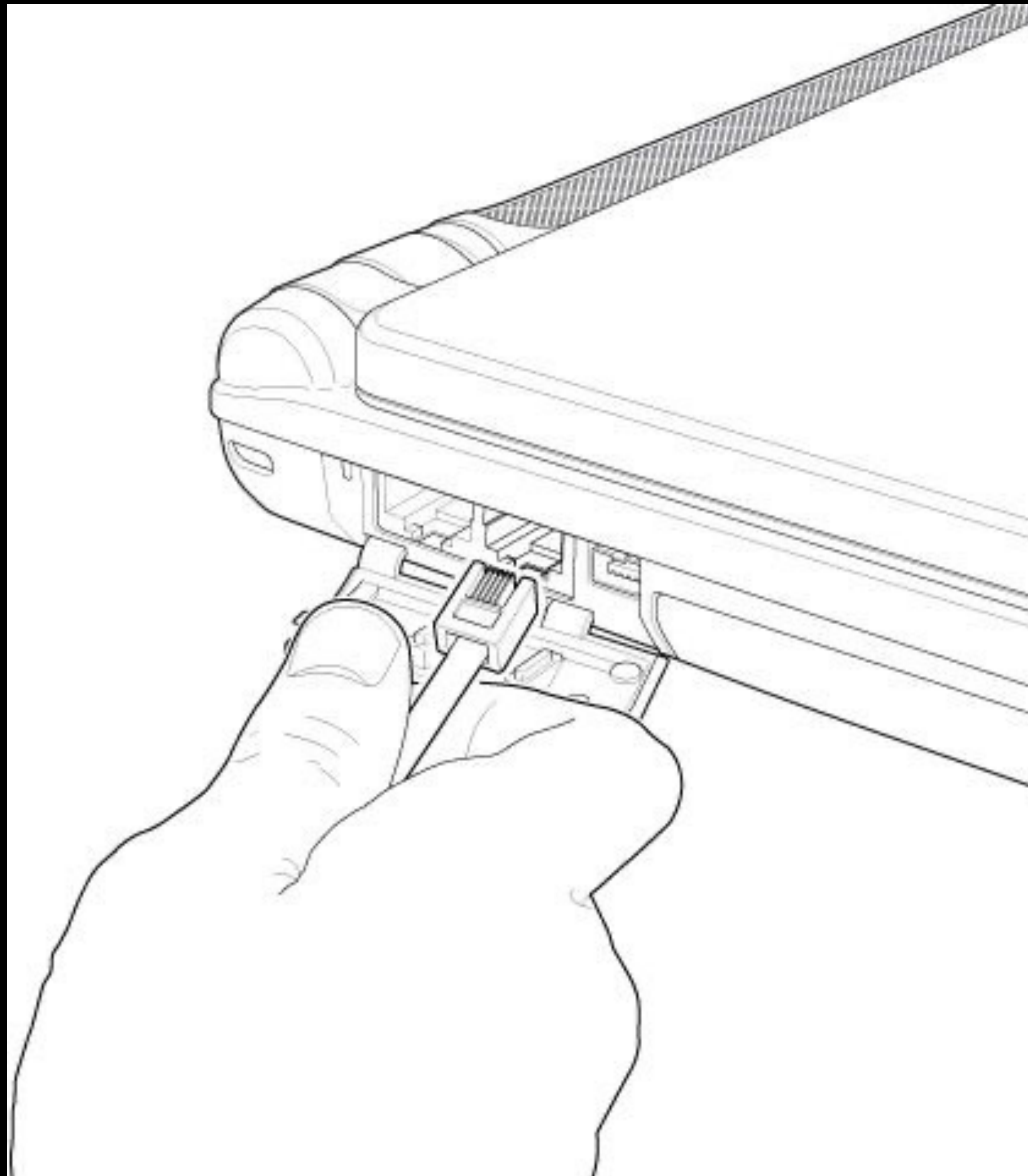
Exploded View

Exploded View

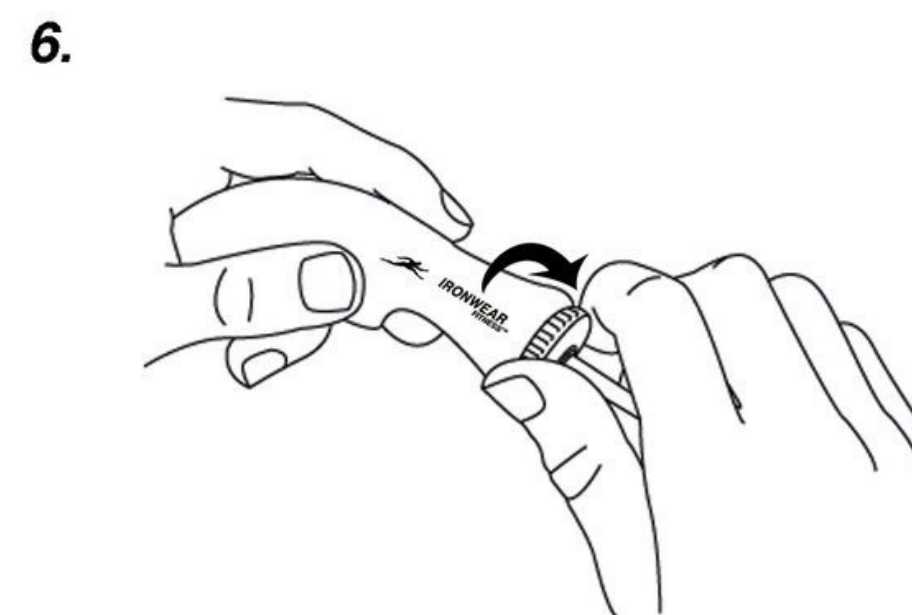
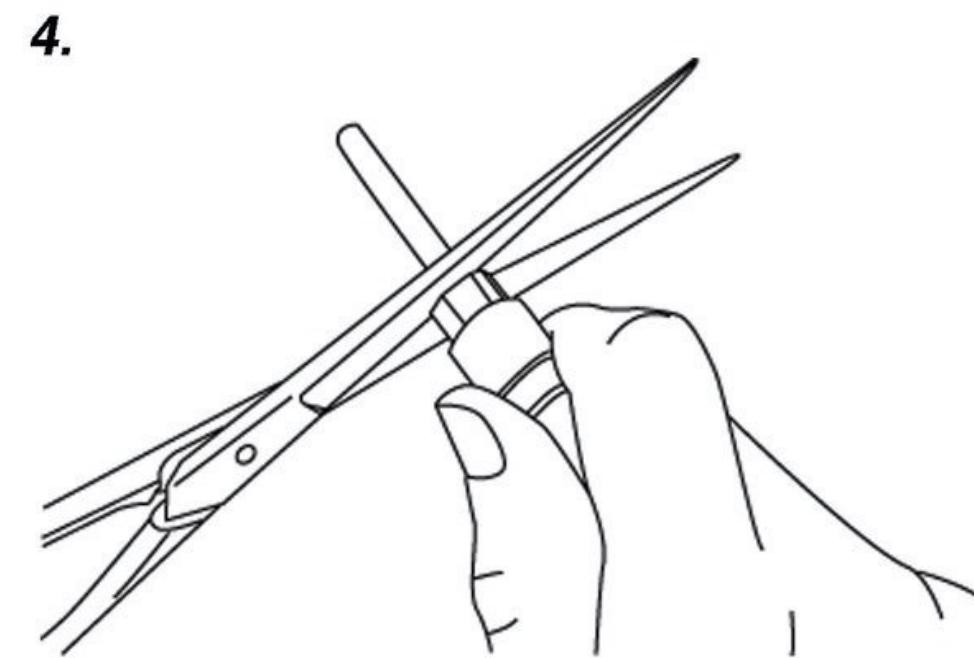
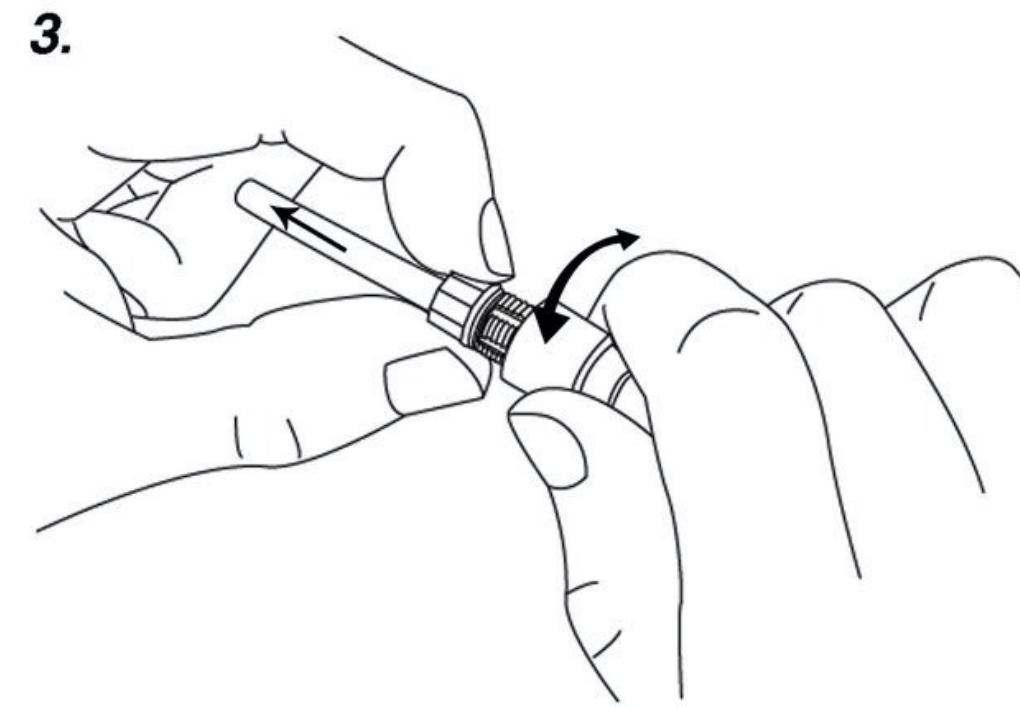
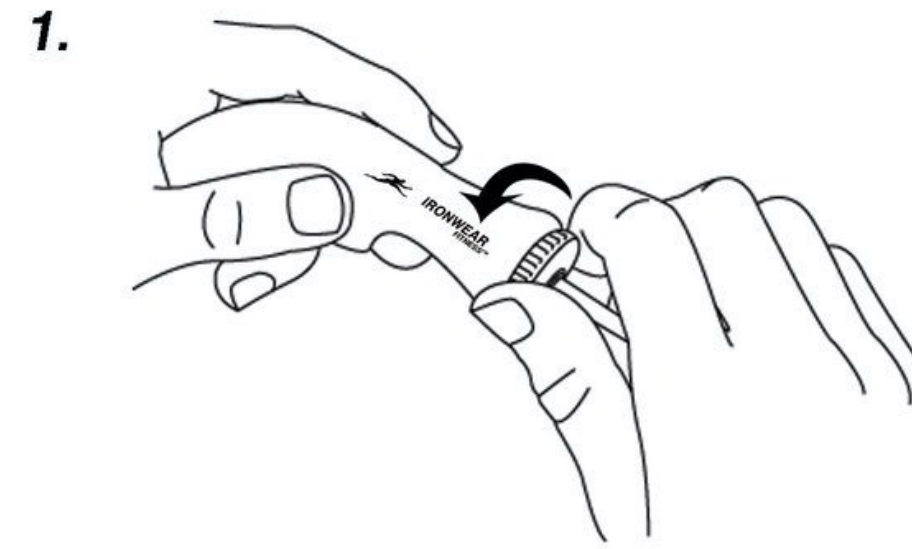


Exploded View



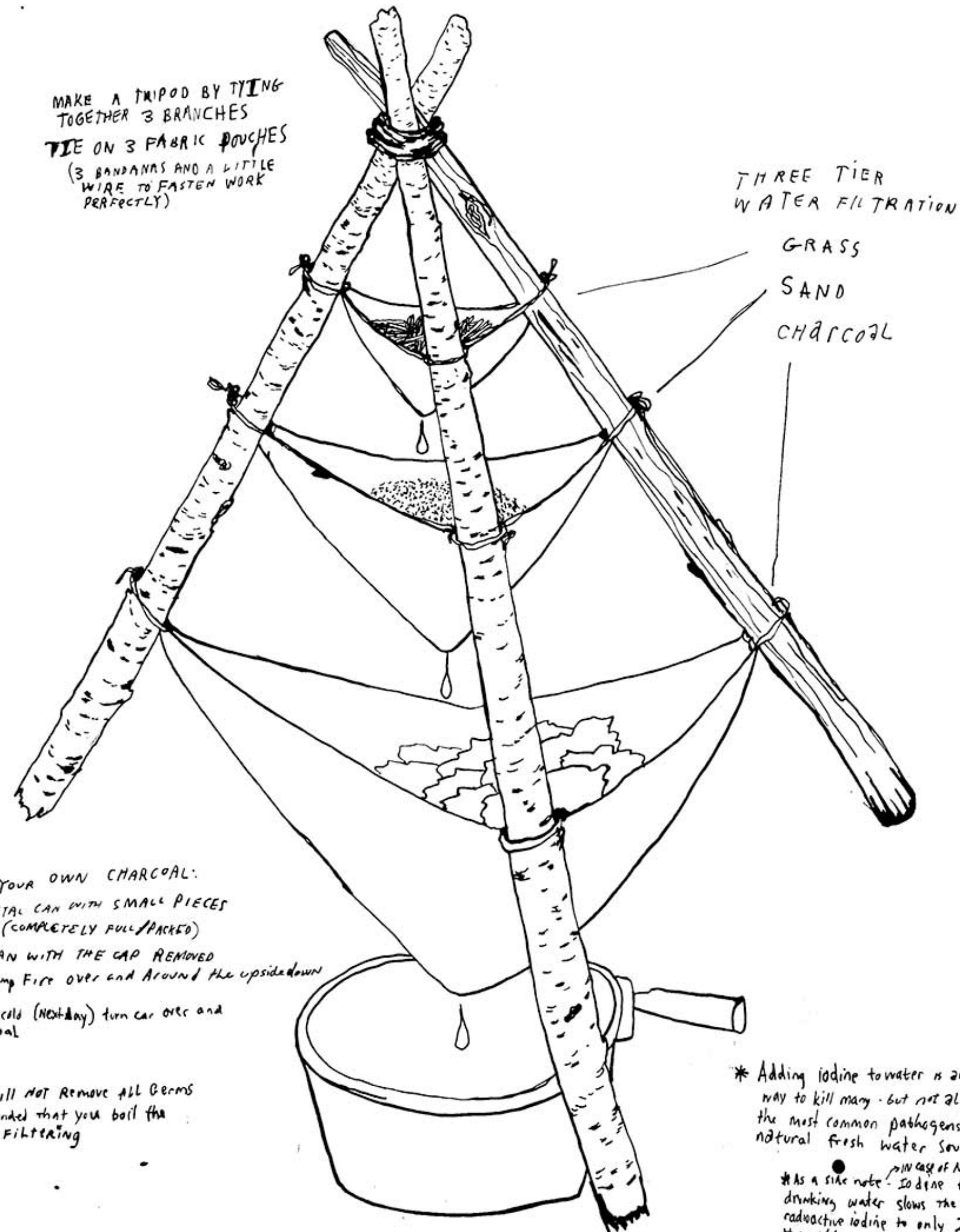


Instructional



Purifying Water

THE D.I.Y. IMPROVISED LOW TECH WAY



MAKE A TRIPOD BY TYING TOGETHER 3 BRANCHES
TIE ON 3 FABRIC POUCHES
(3 BANANAS AND A LITTLE WIRE TO FASTEN WORK PERFECTLY)

THREE TIER WATER FILTRATION

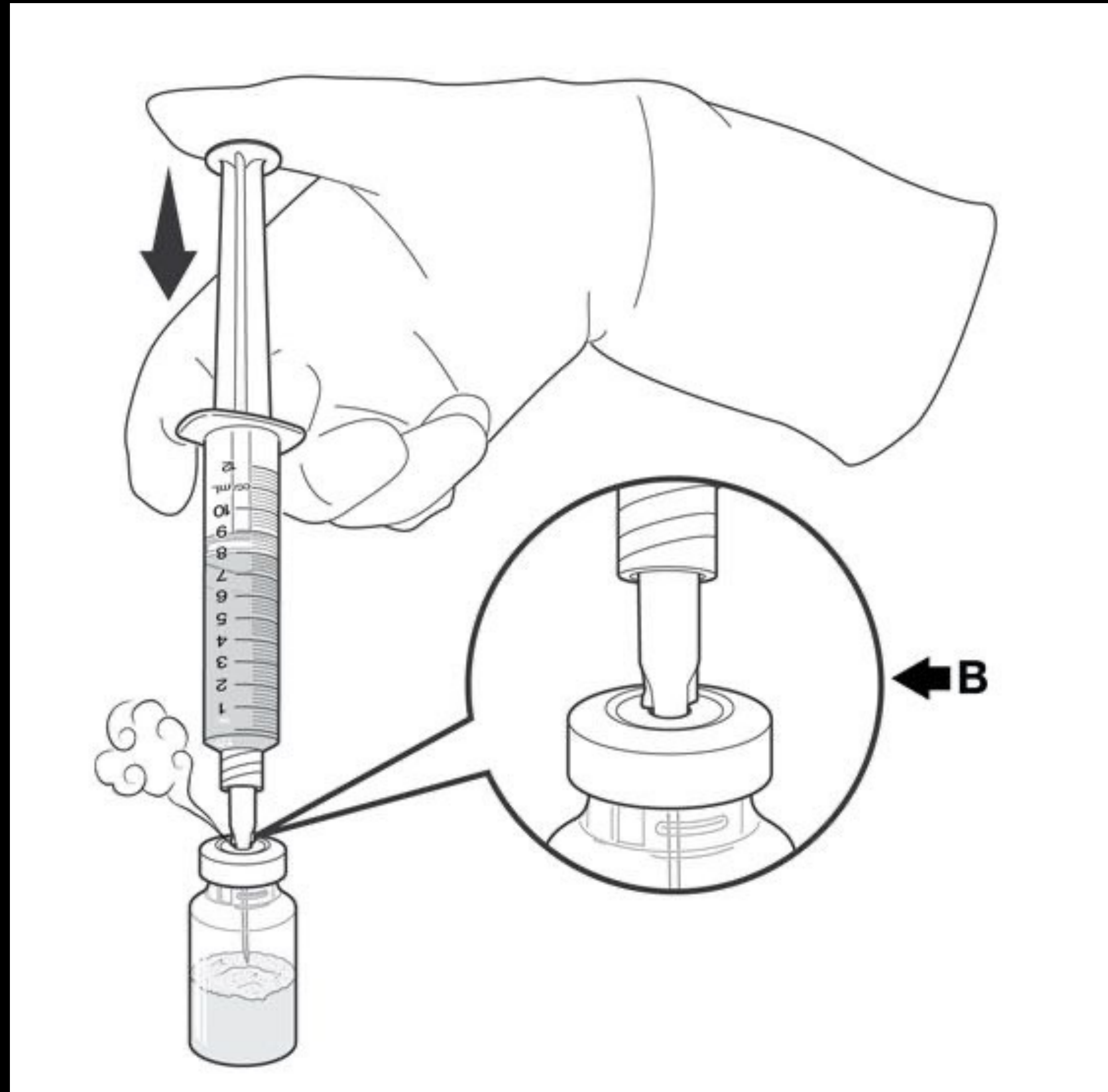
GRASS
SAND
CHARCOAL

- * TO MAKE YOUR OWN CHARCOAL:
- FILL A METAL CAN WITH SMALL PIECES OF WOOD (COMPLETELY FULL/PACKED)
 - INVERT CAN WITH THE CAP REMOVED
 - START A CAMP FIRE OVER AND AROUND THE UPSIDE-DOWN CAN.
 - Once Ashes are cold (NOT-HOT) turn can over and use charcoal

* This filter will NOT REMOVE ALL GERMS
It is recommended that you boil the water after filtering

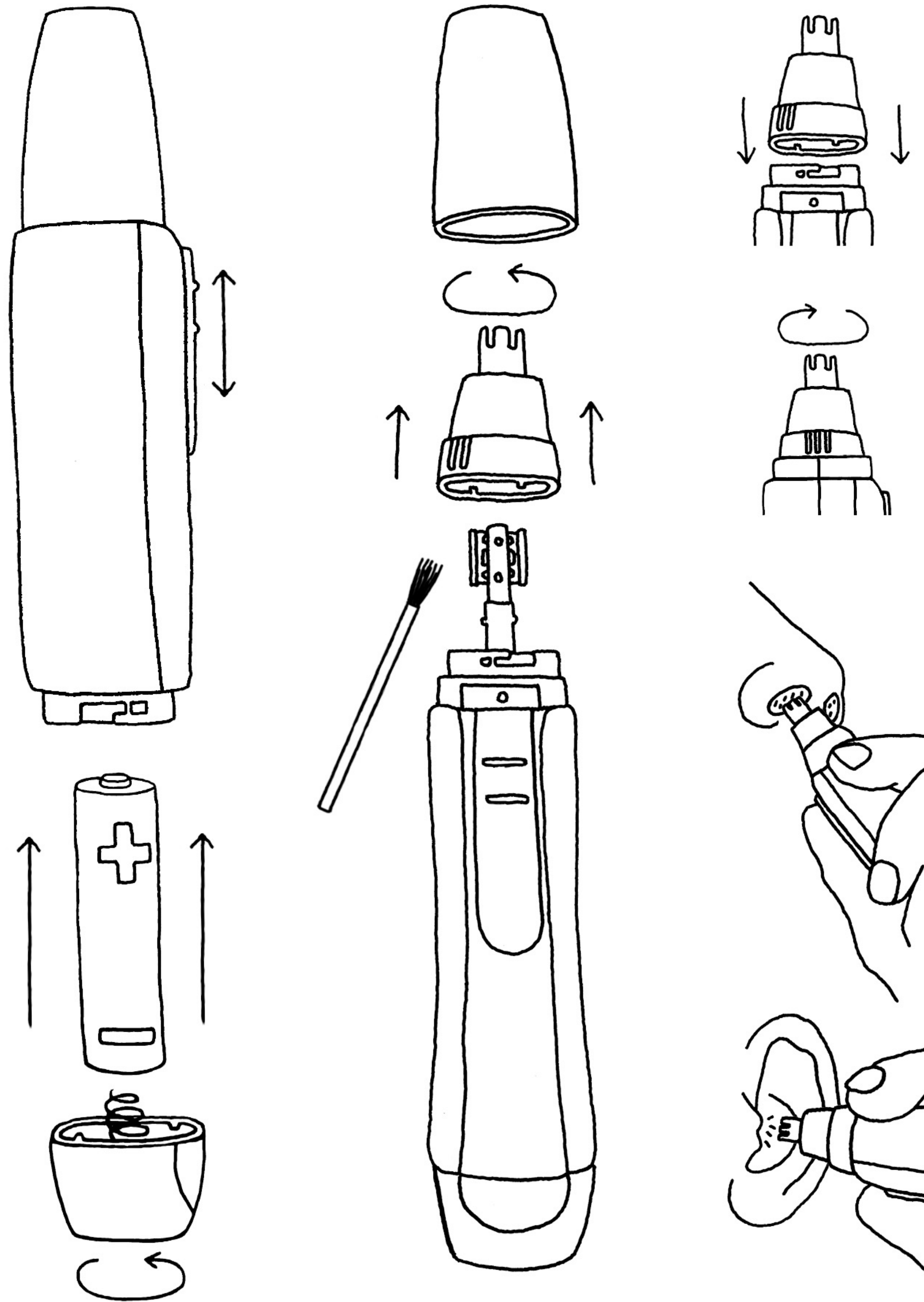
* Adding iodine to water is another way to kill many - but not all - of the most common pathogens in natural fresh water sources

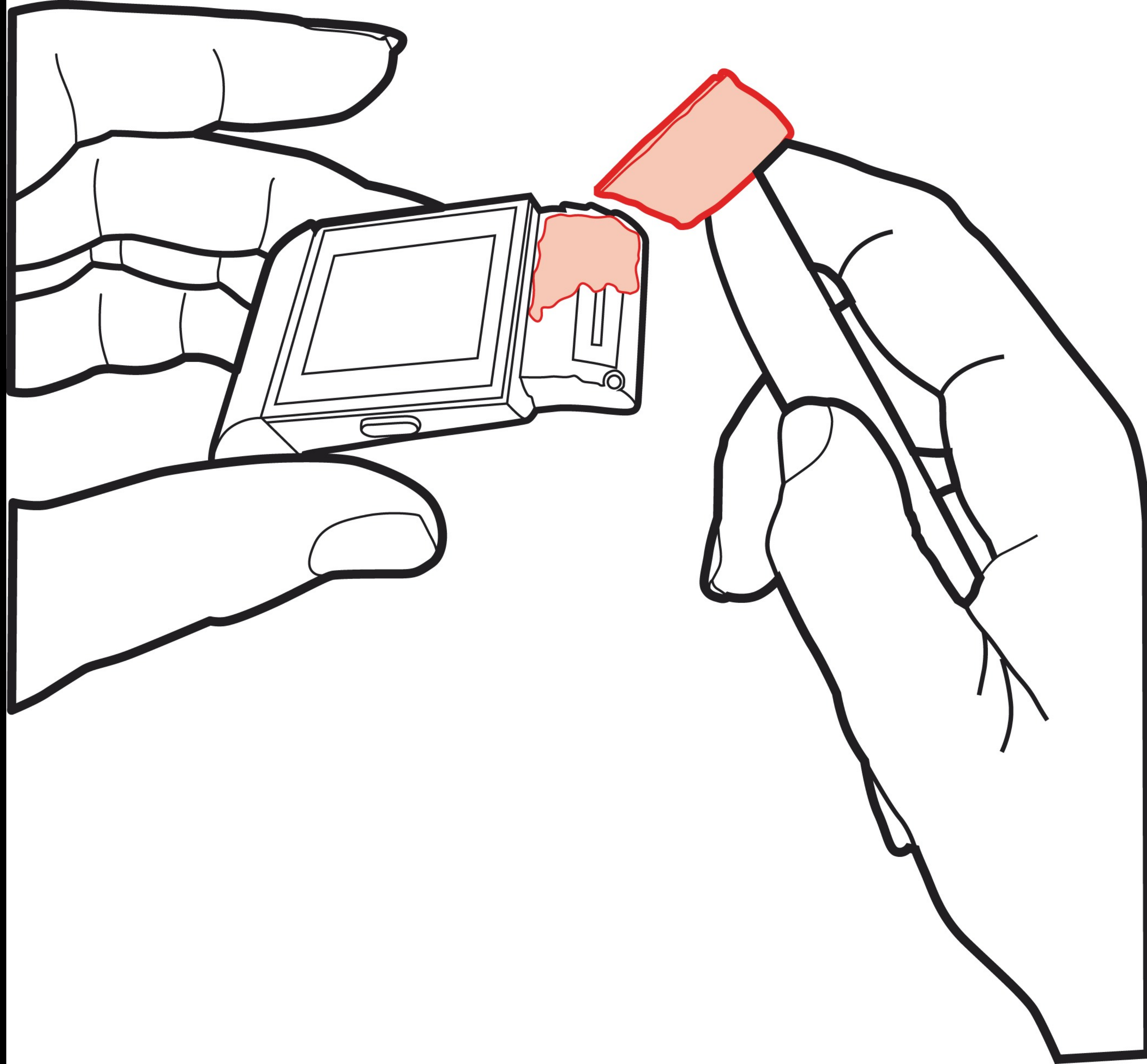
As a side note - In case of Nuclear fallout iodine treated drinking water slows the uptake of radioactive iodine to only 2% of what it would be



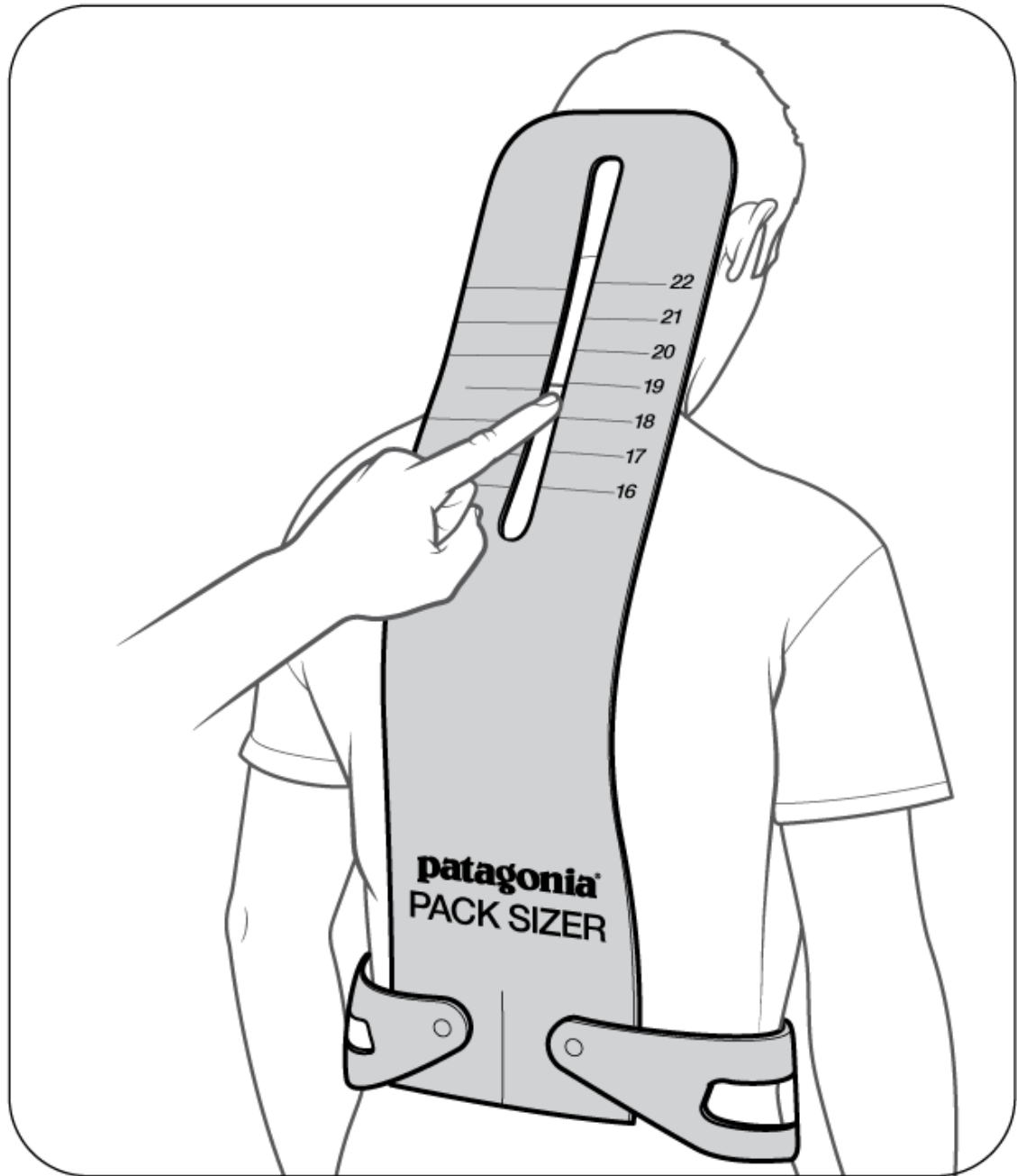
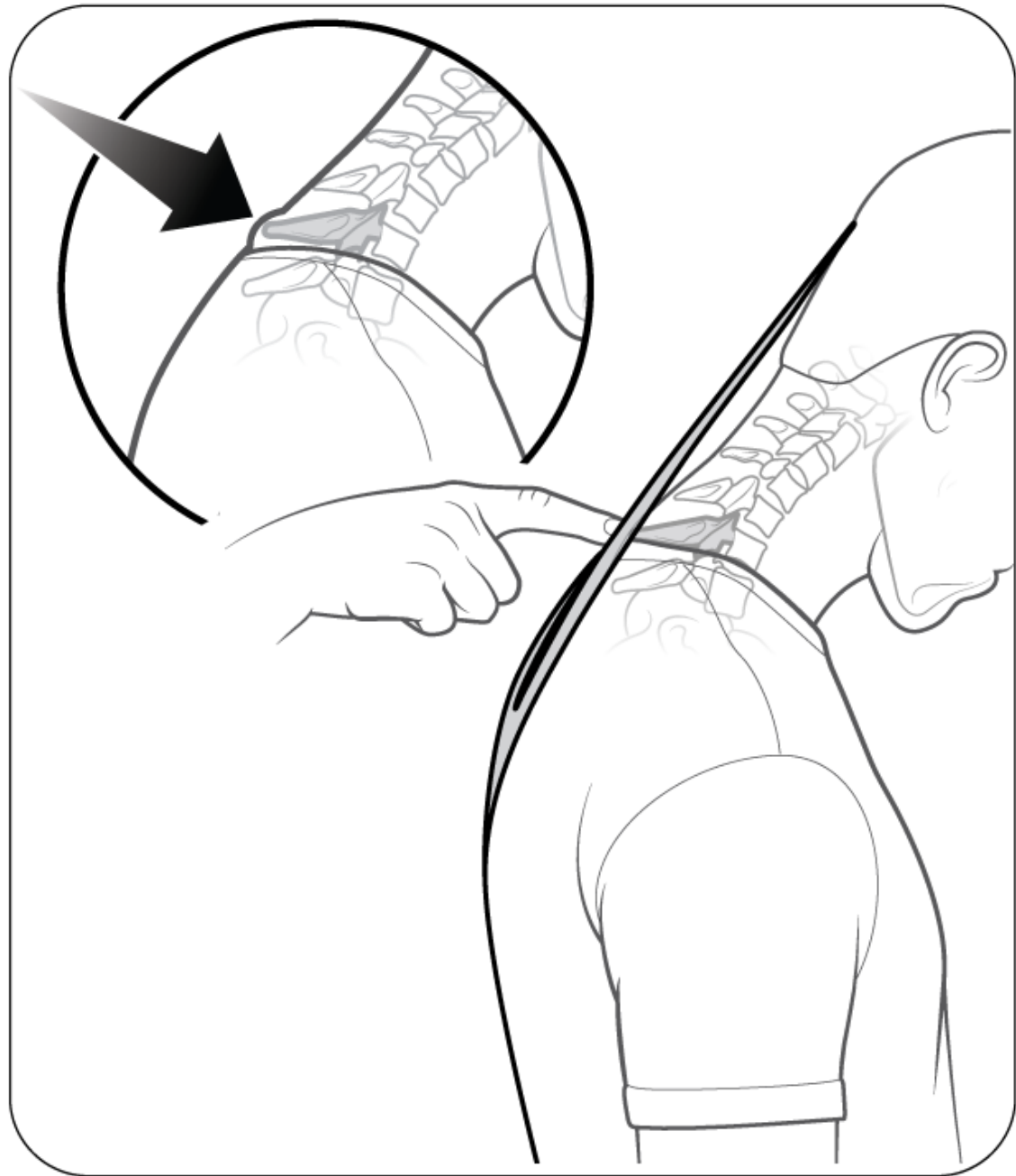
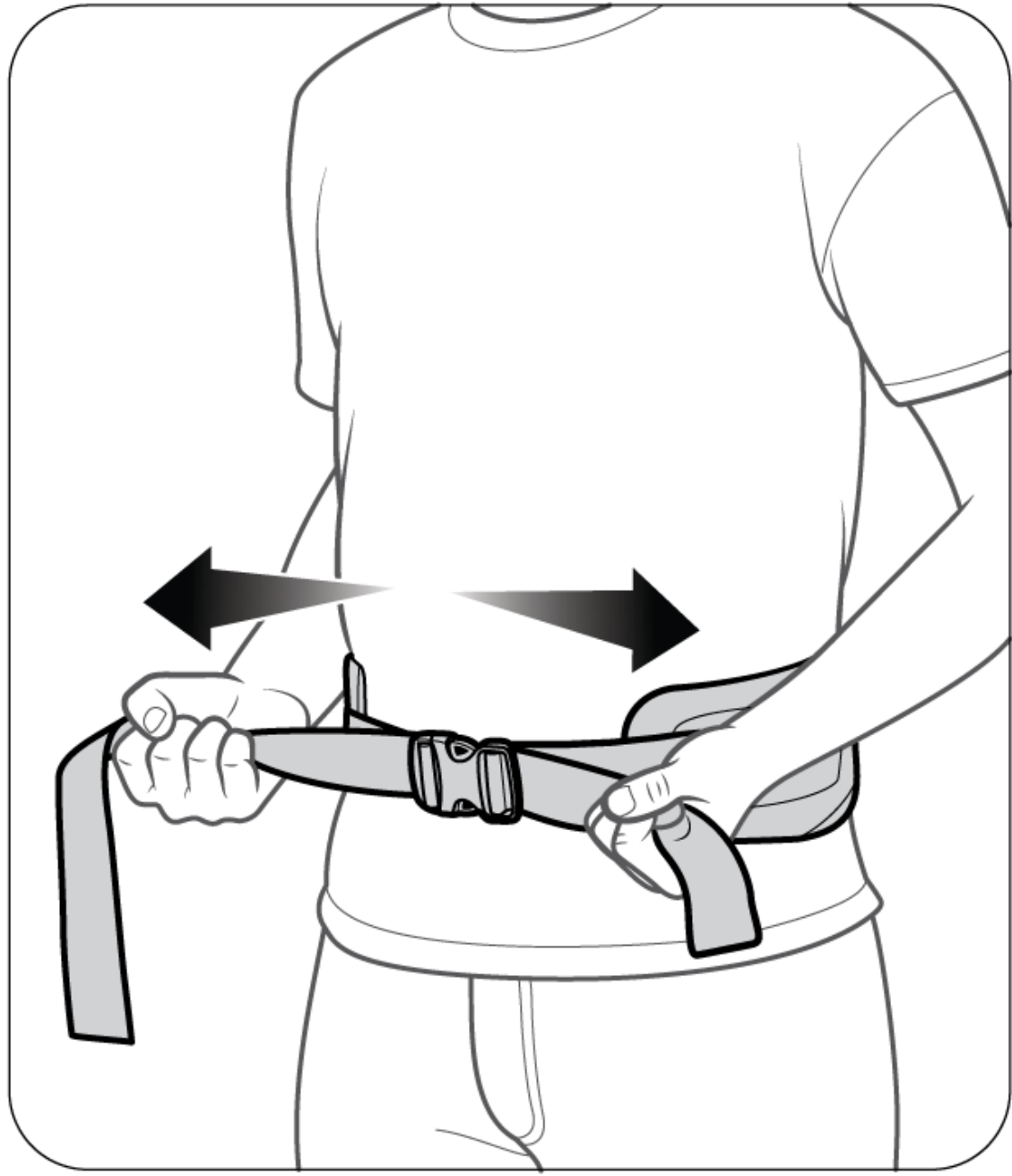
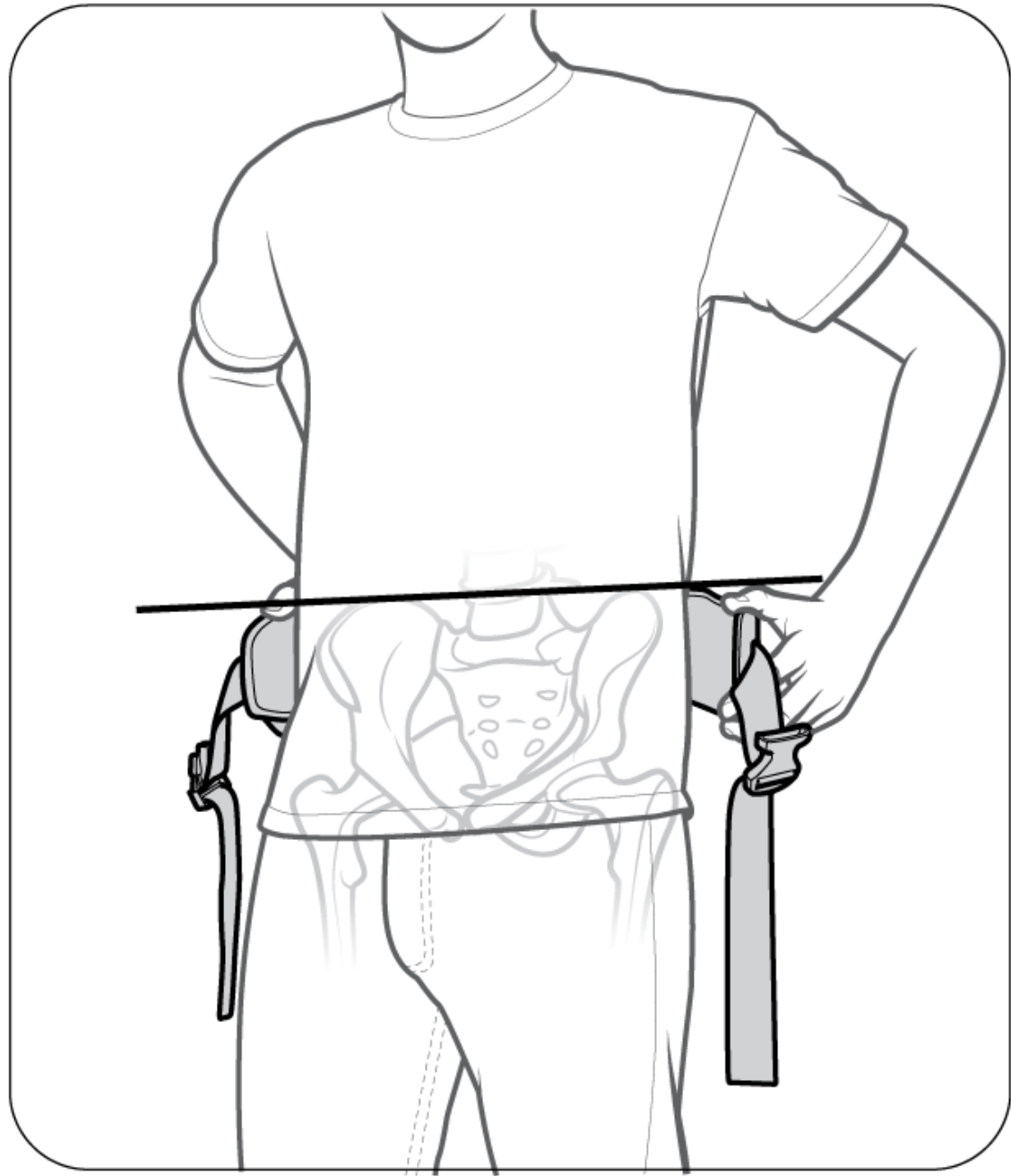
Instructional

Instructional

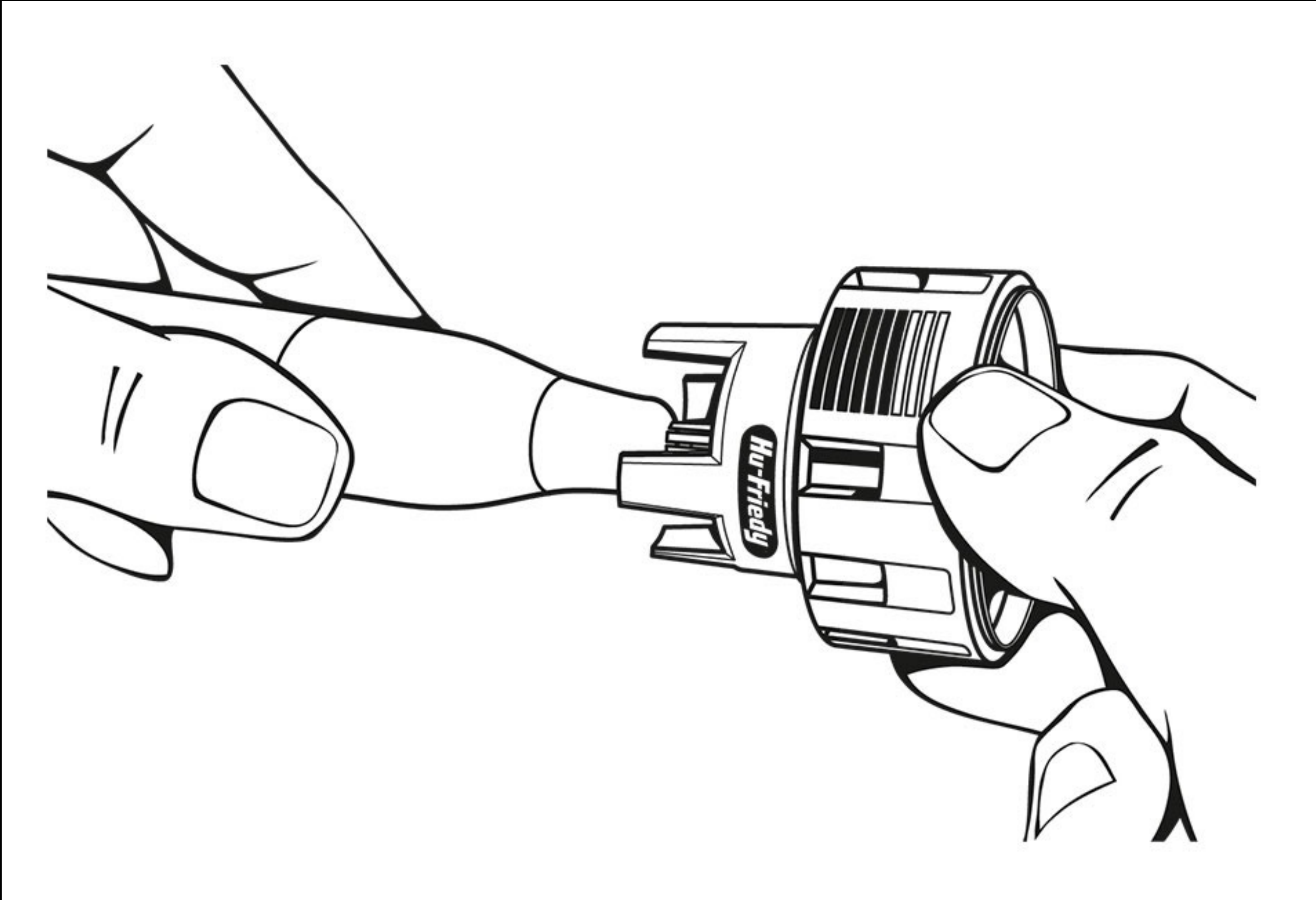




Instructional



Instructional



Instructional



Instructional

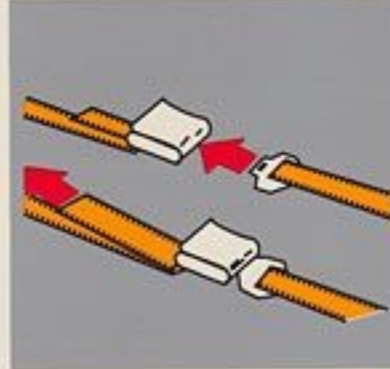
**SECURITE A BORD
SAFETY ON BOARD**

**PREMIERE
AIR
AFRIQUE
DC.10**

**DECOLLAGES ET ATERRISSAGE
ATTAKE-OFF AND LANDING**



**ATTACHEZ VOS CEINTURES
FASTEN SEAT BELT**



**NE PAS FUMER
NO SMOKING**



**TOILETTE
LAVATORIES**



**OXYGENE
OXYGEN**



**GILET DE SAUVETAGE
LIFE VEST**



**RADEAU DE SAUVETAGE
LIFE RAFT**



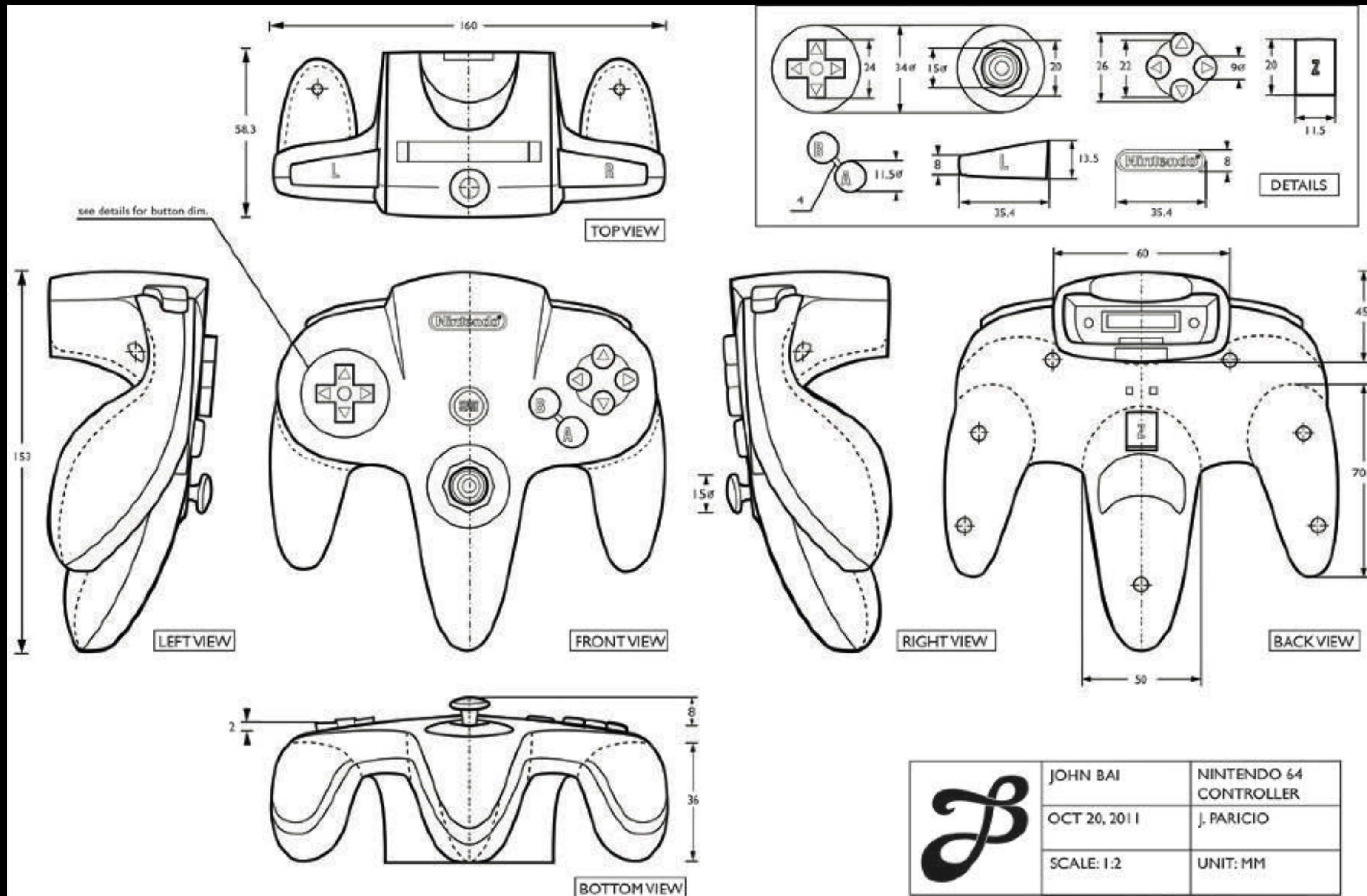
**PRIERE DE LAISSER CE DOCUMENT A BORD
PLEASE DO NOT REMOVE FROM AIRCRAFT**

Instructional

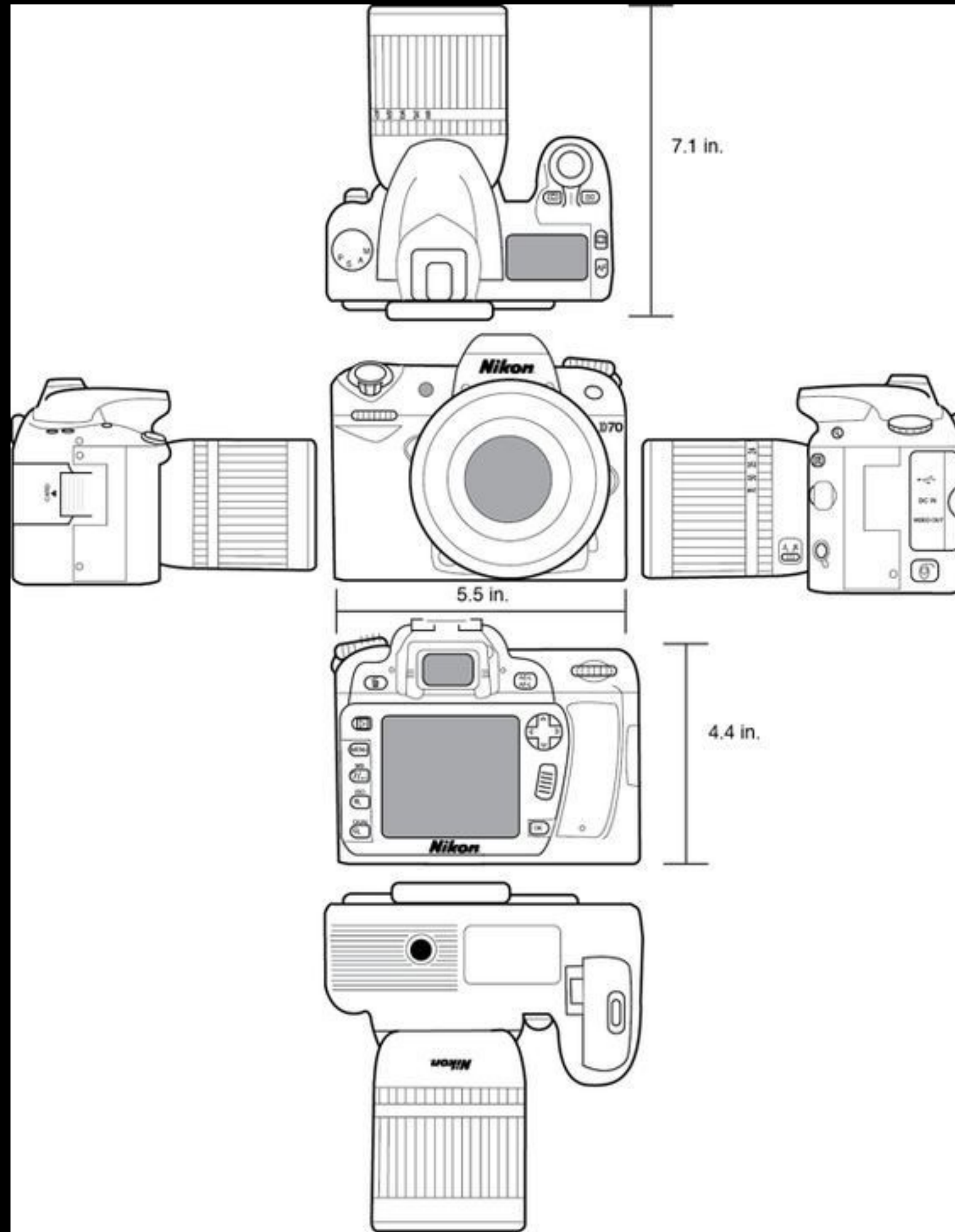
OXYGEN OXÍGENO



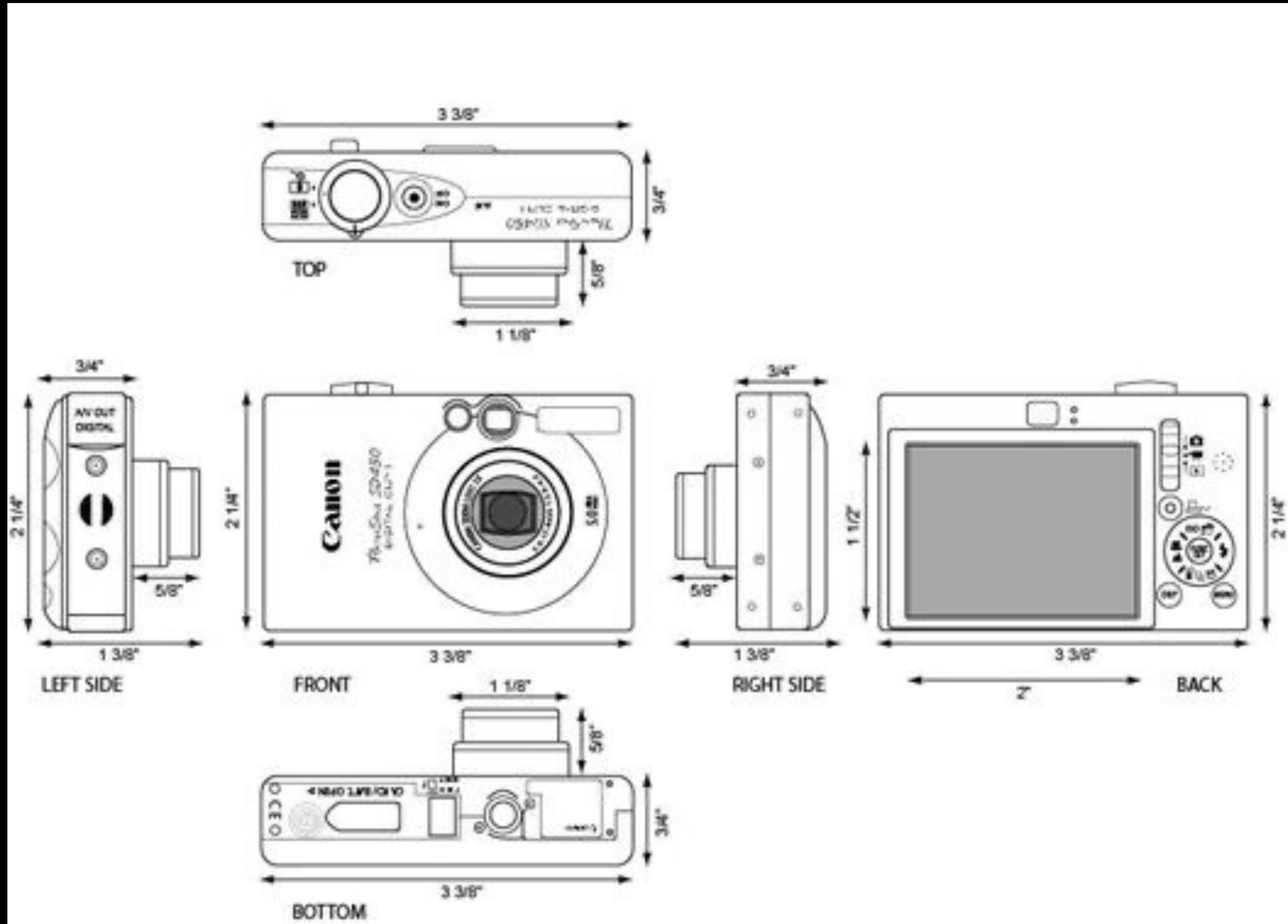
Instructional



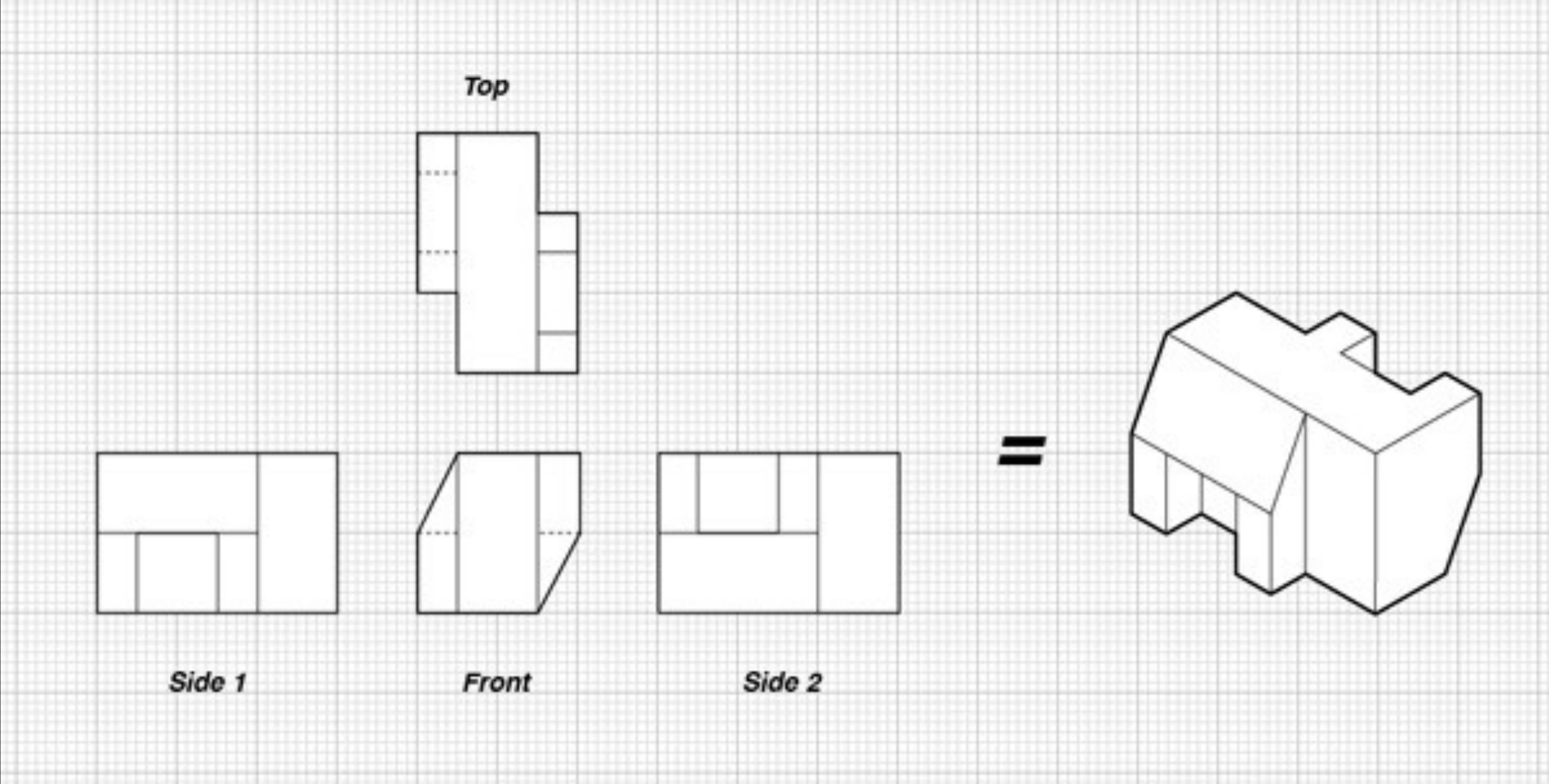
Orthographic View



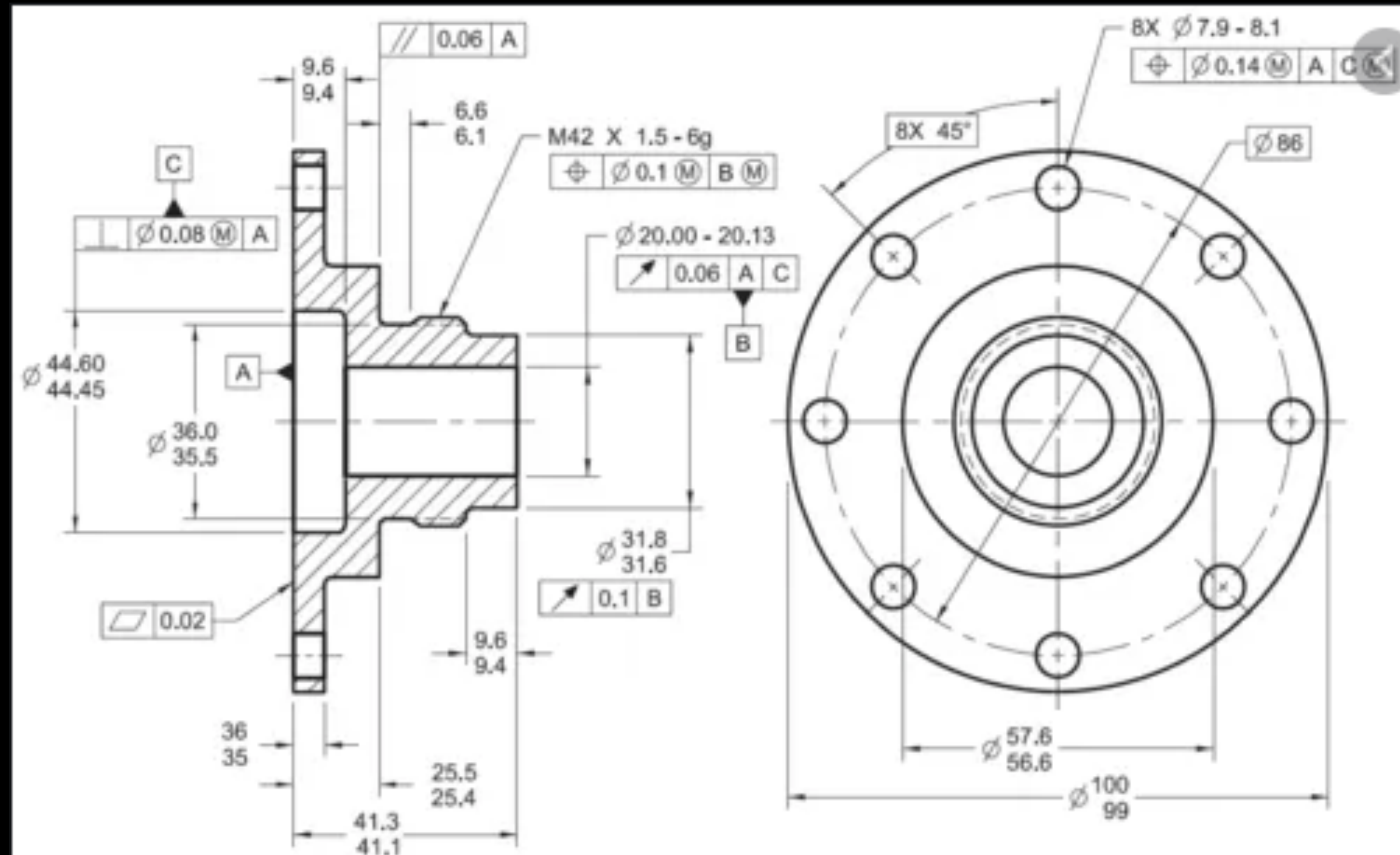
Orthographic View



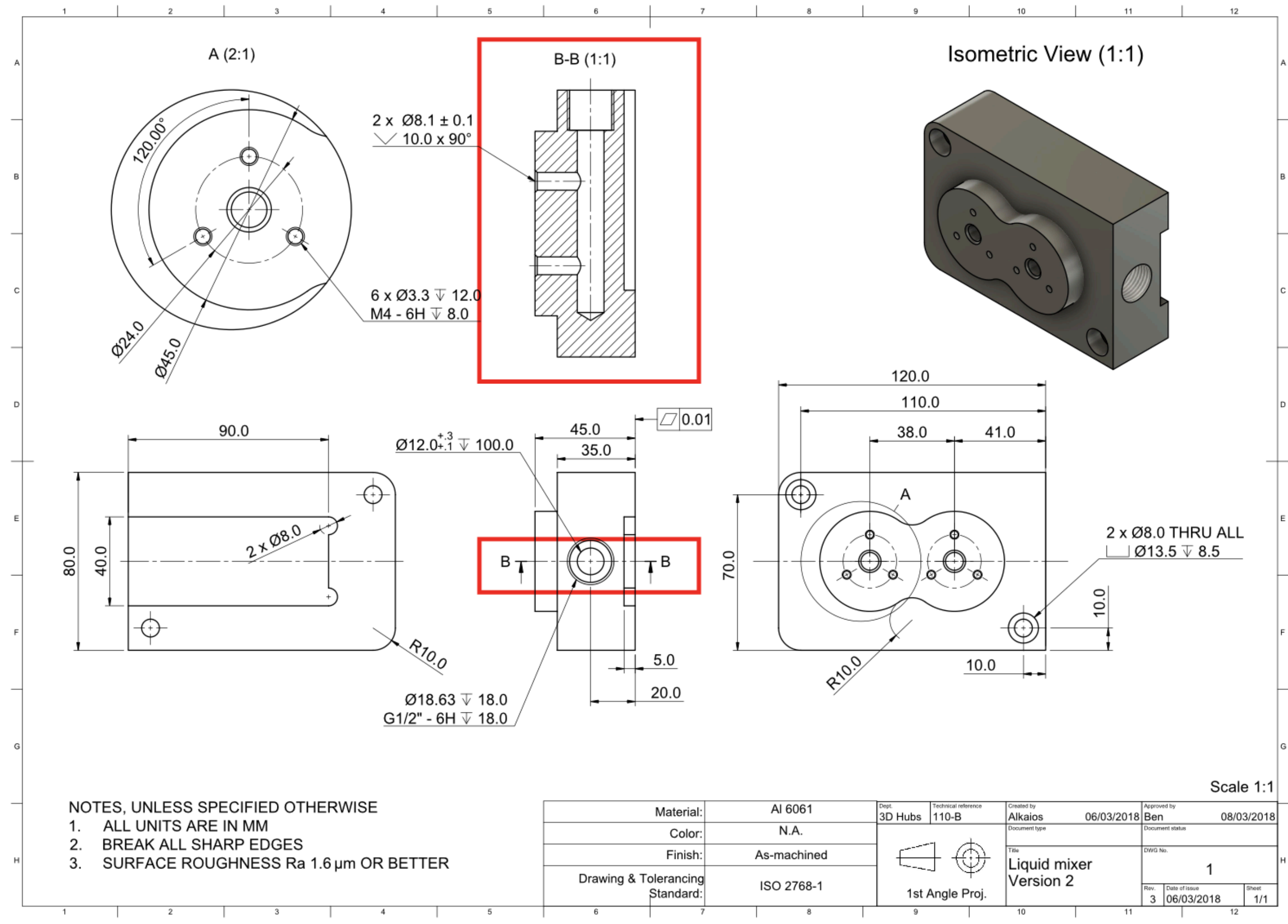
Orthographic View



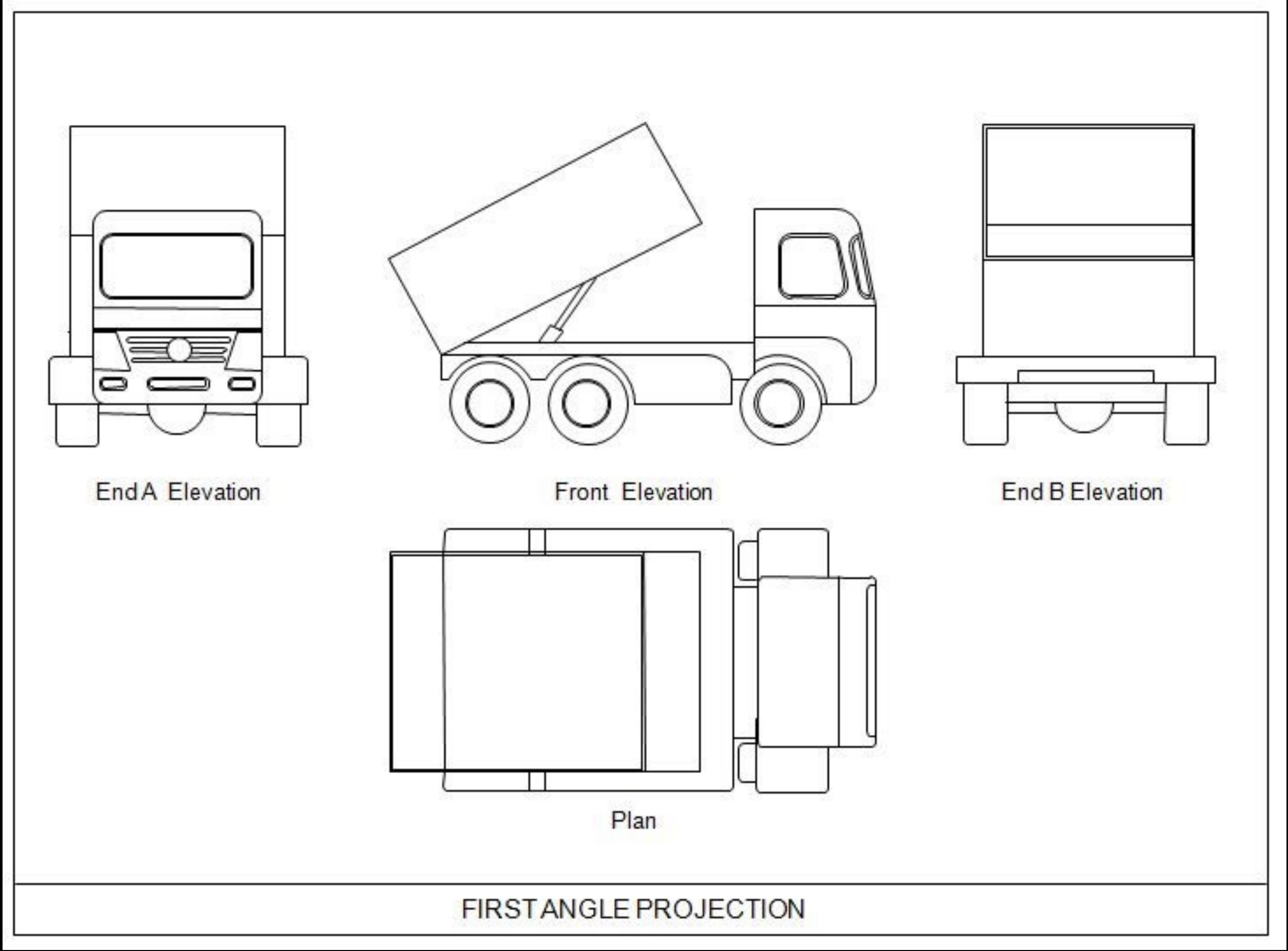
Orthographic View



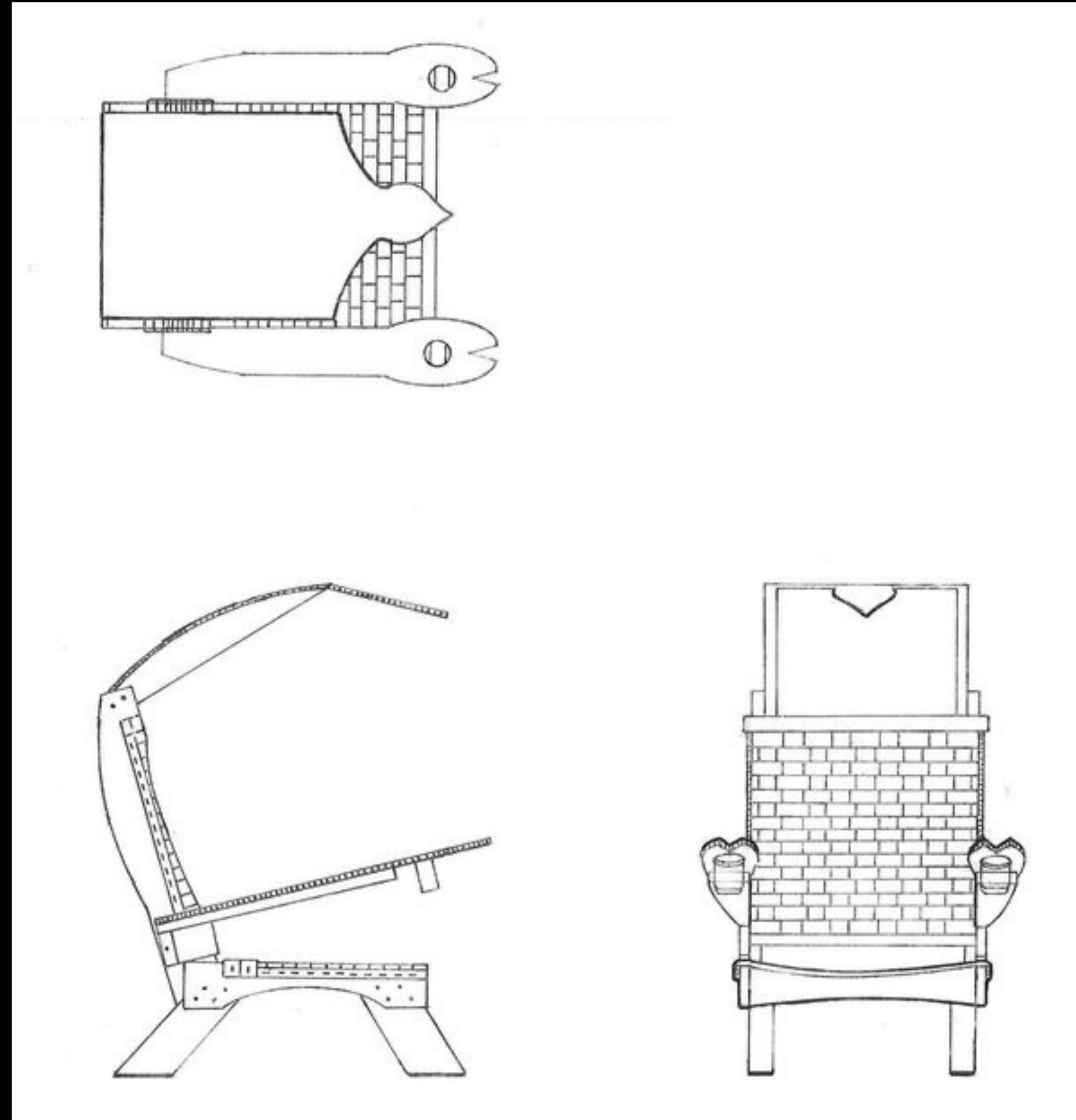
Orthographic View



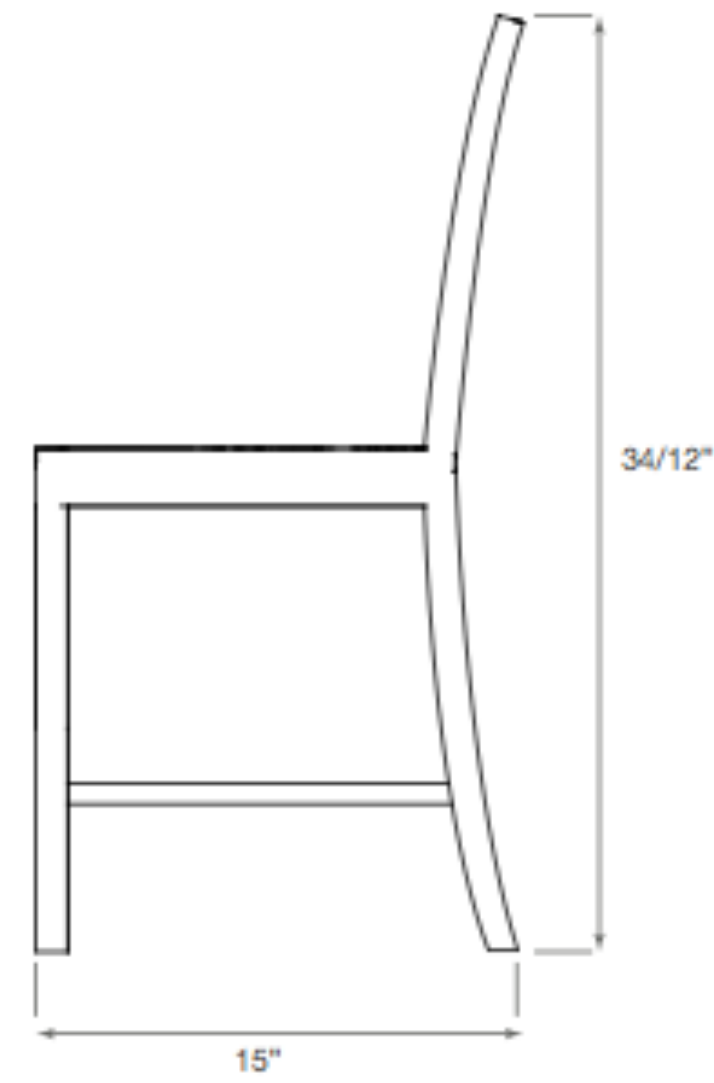
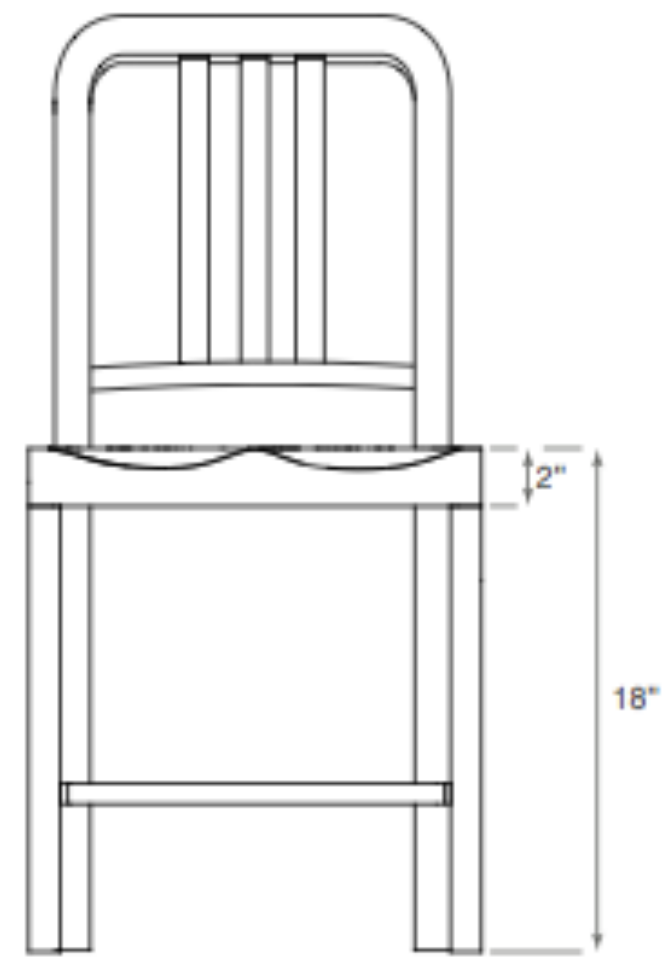
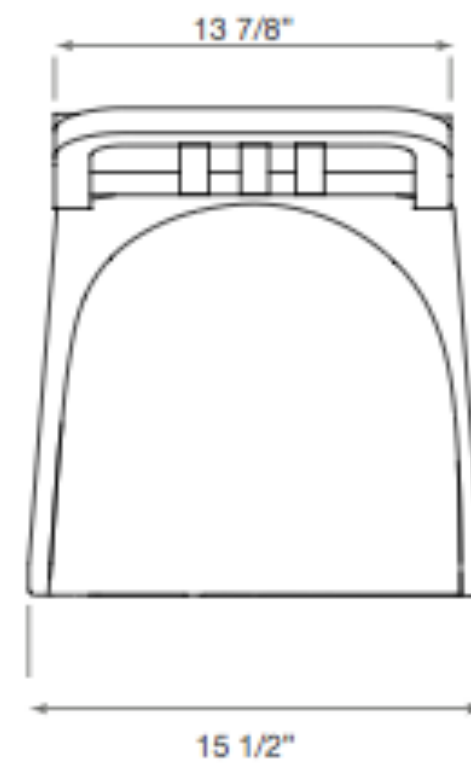
Orthographic View



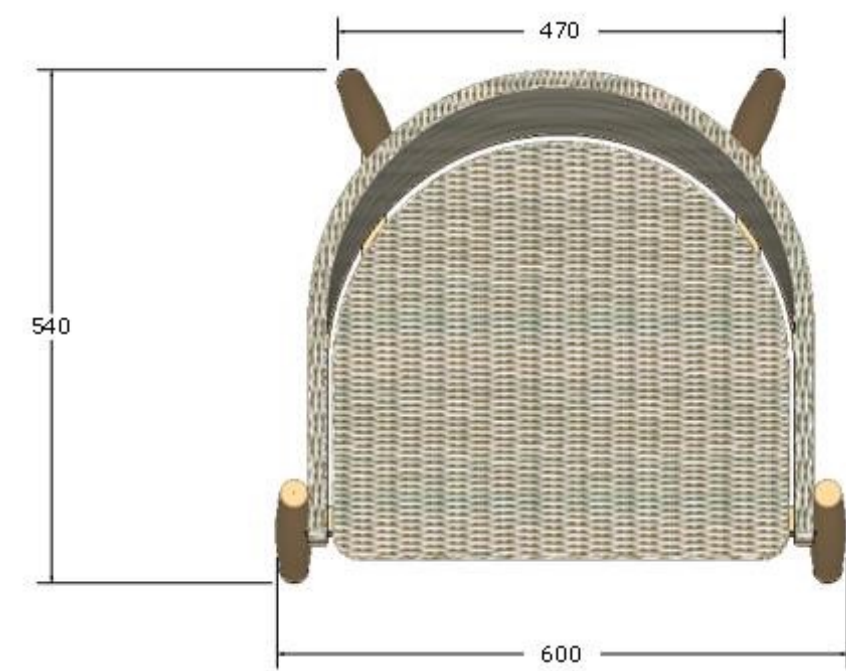
Orthographic View



Orthographic View



Orthographic View



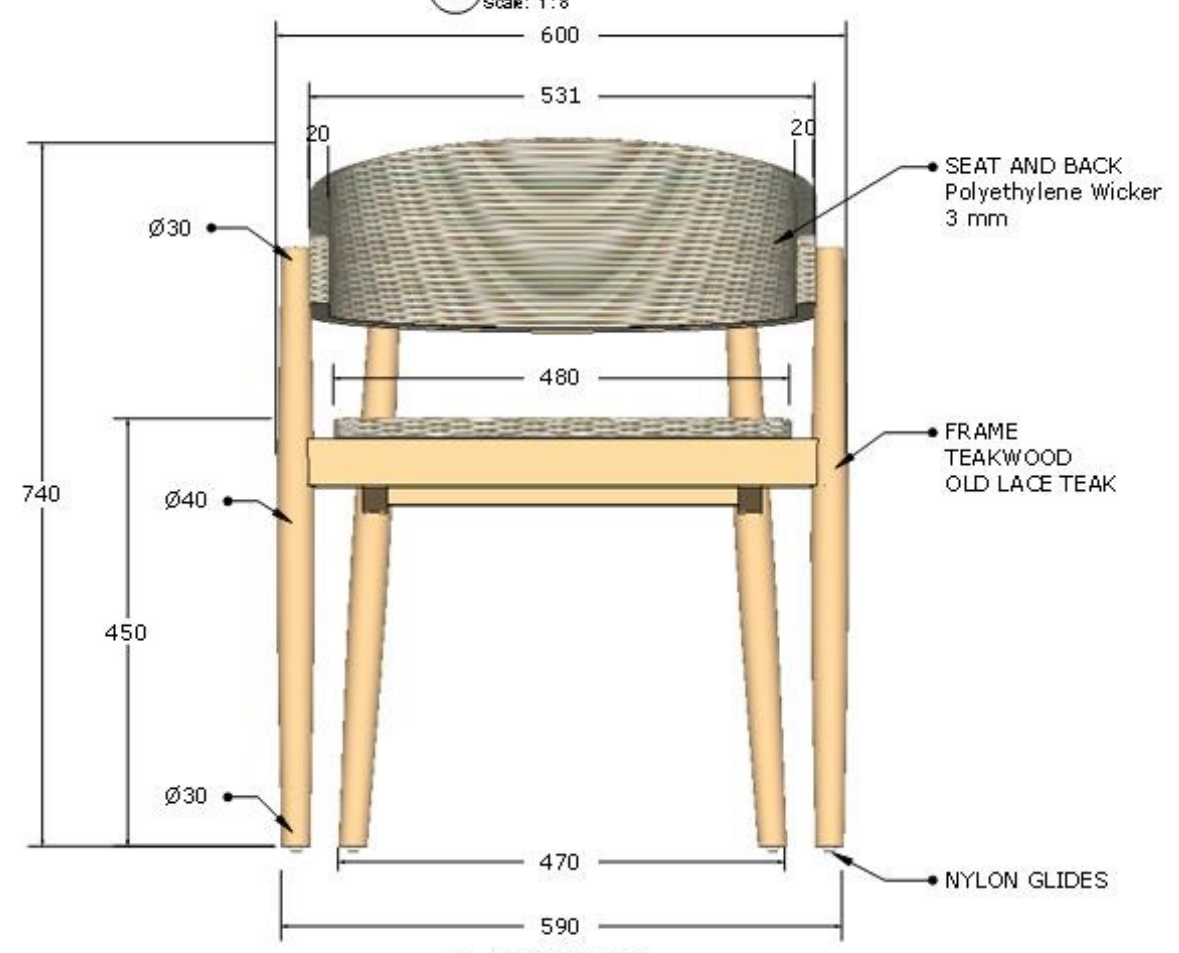
1 TOP VIEW
Scale: 1:8



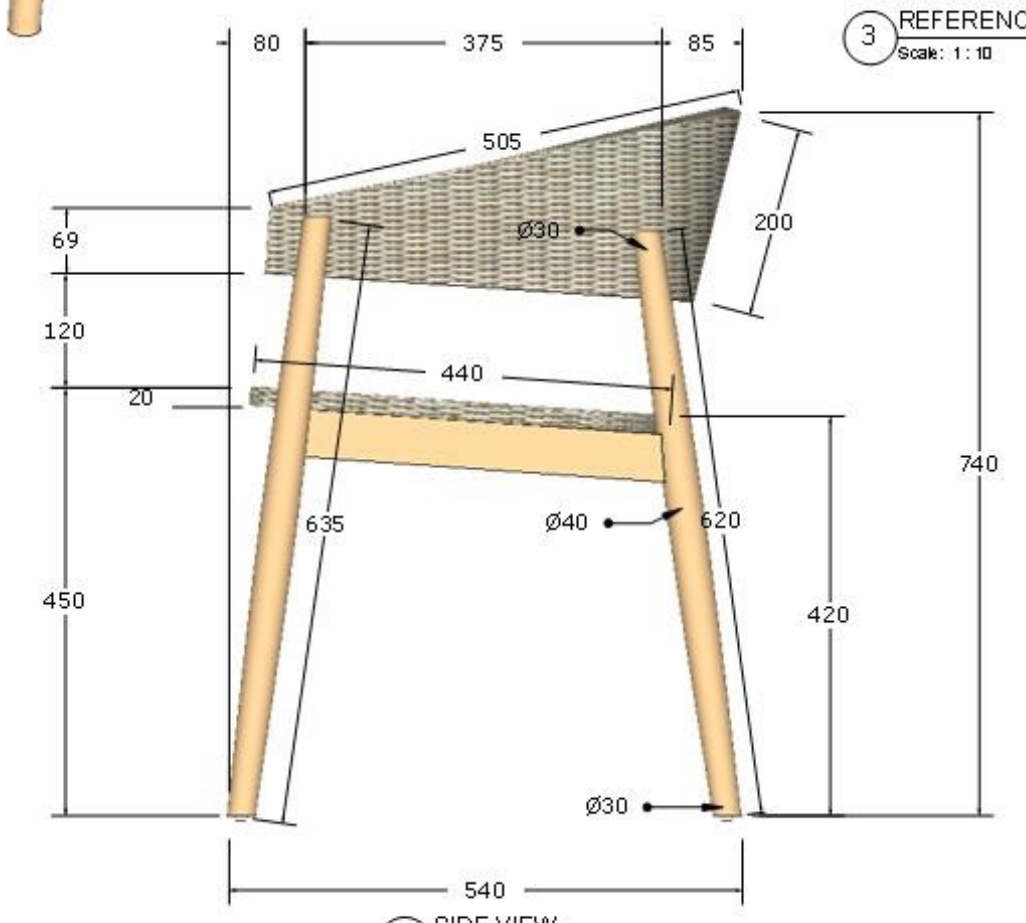
2 PERSPECTIVE
Scale: NTS



3 REFERENCE IMAGE
Scale: 1:10



4 FRONT VIEW
Scale: 1:8



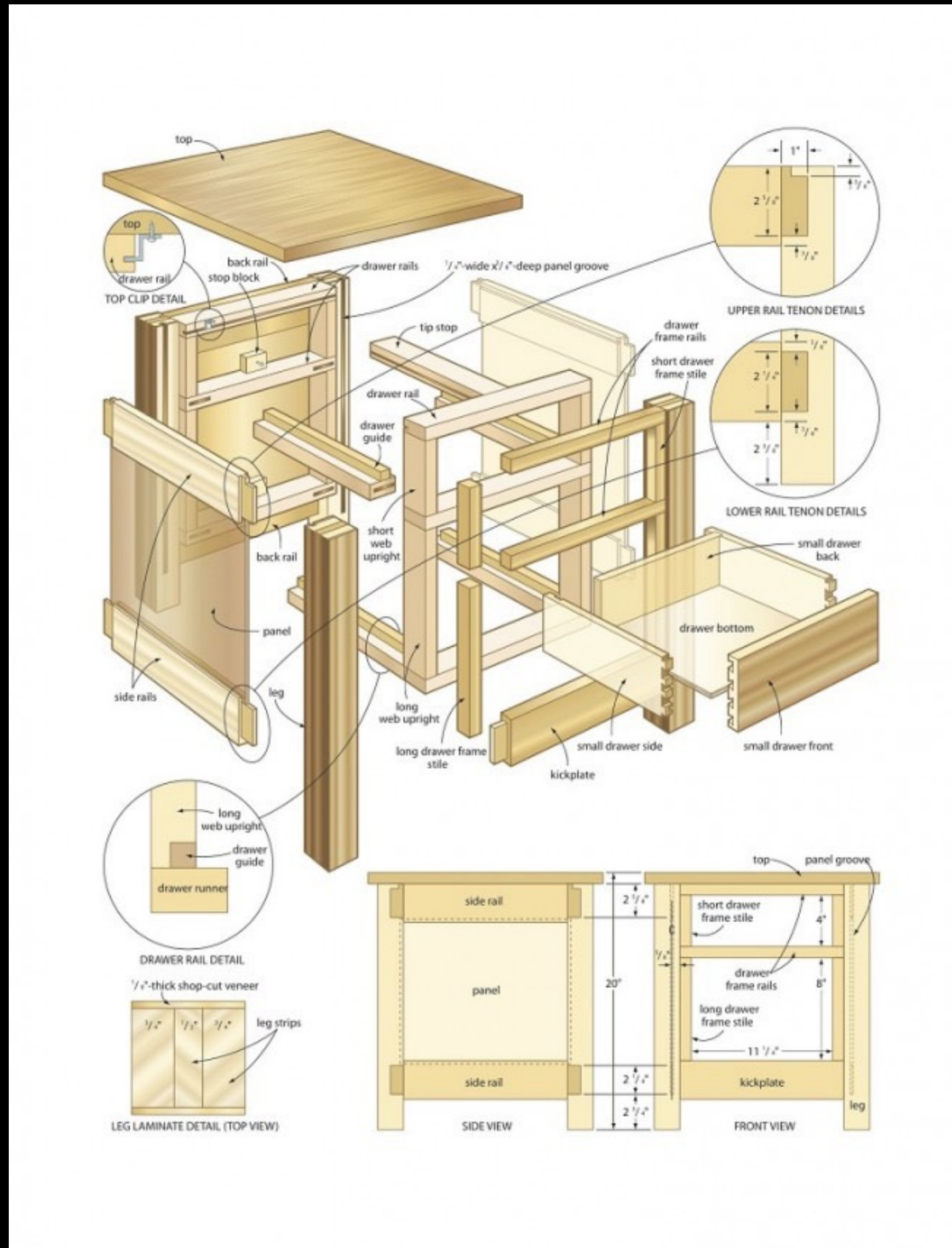
5 SIDE VIEW
Scale: 1:8



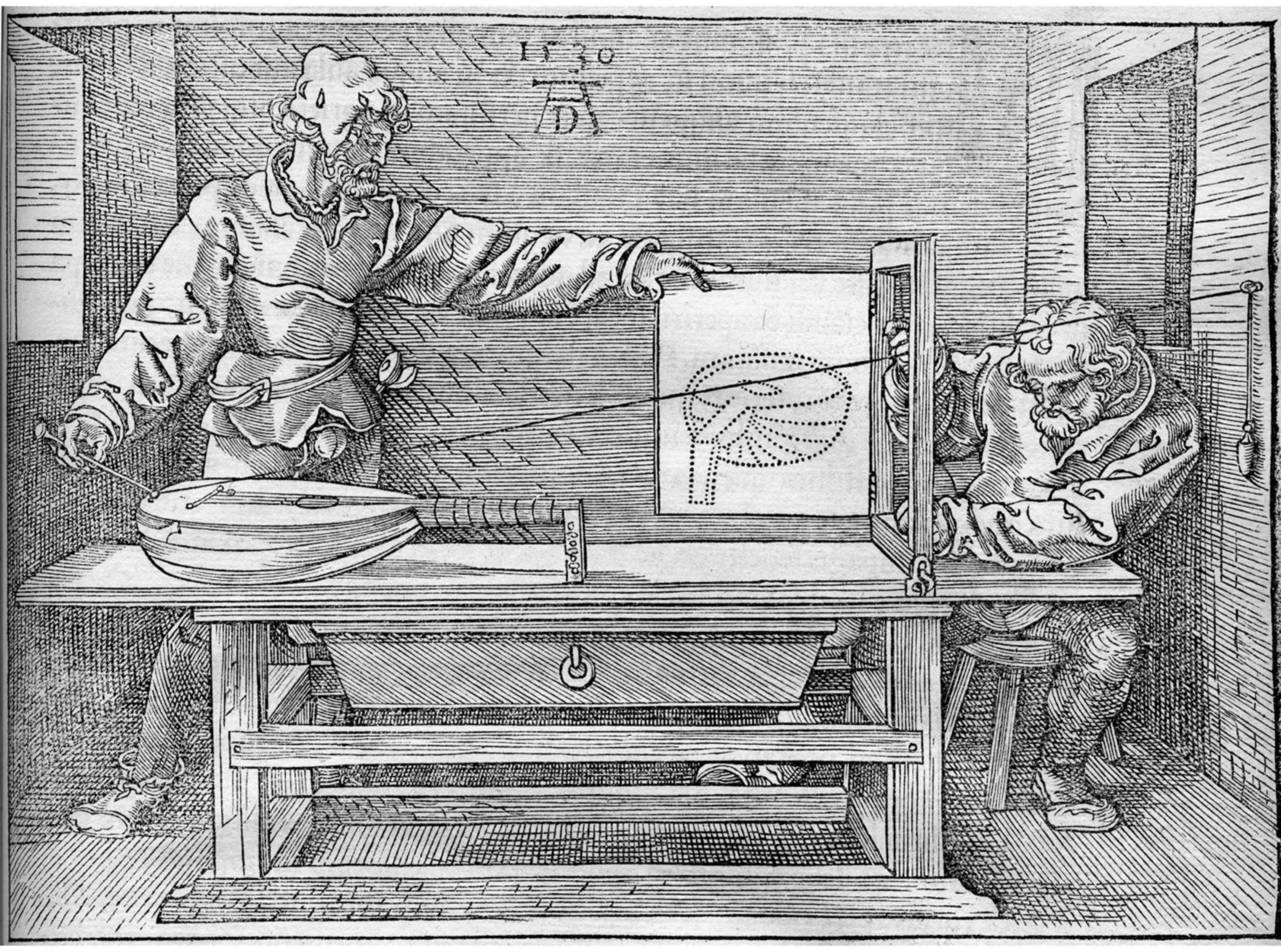
1st SUBMISSION		Client :	Project :	Drawn By :	Paper :
01	01-03-2021	BUYER	Address :	ANTERIOR-DESIGN	A3
02	-			Scale :	Page :
03	-			1:8	00
			Drawing :	DINING CHAIR 600x540x740 MM	

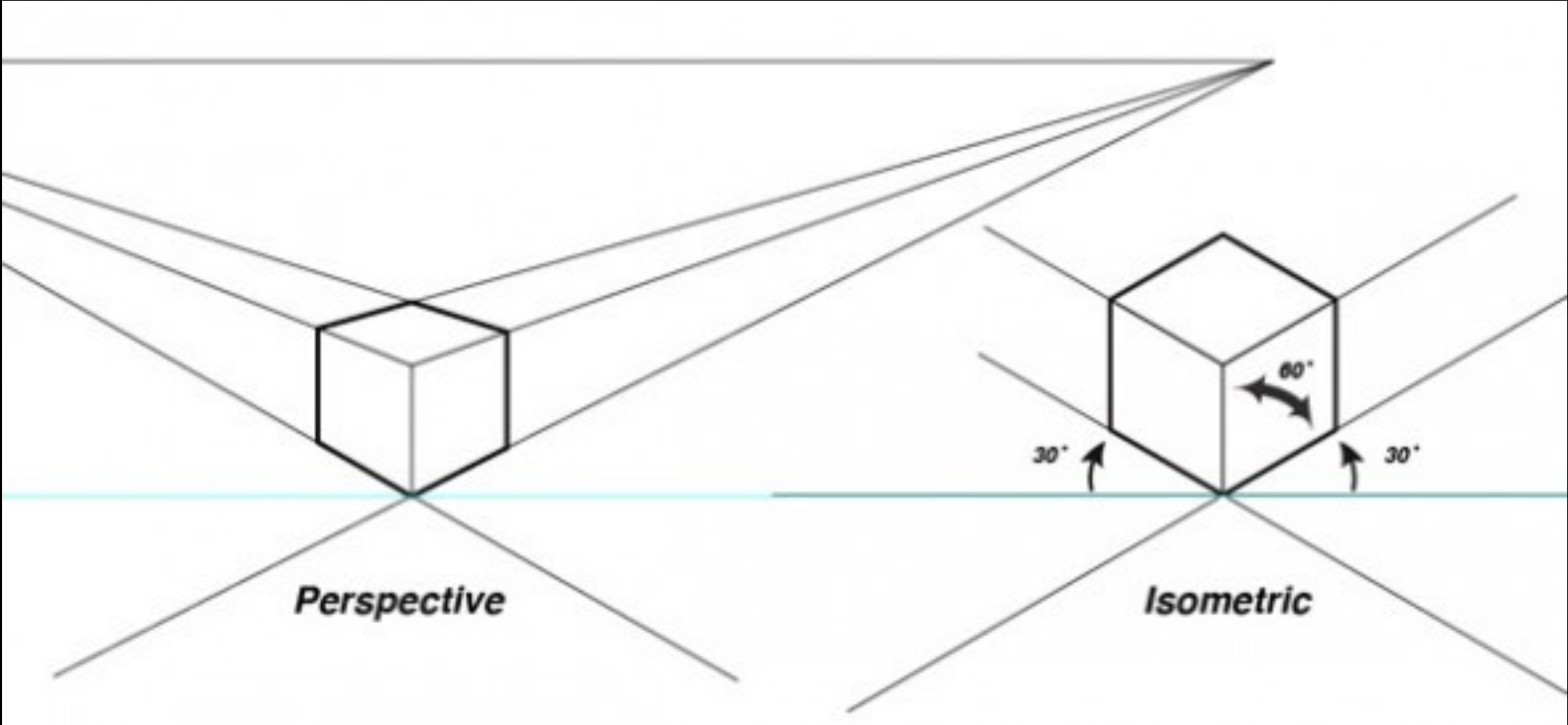
Orthographic View

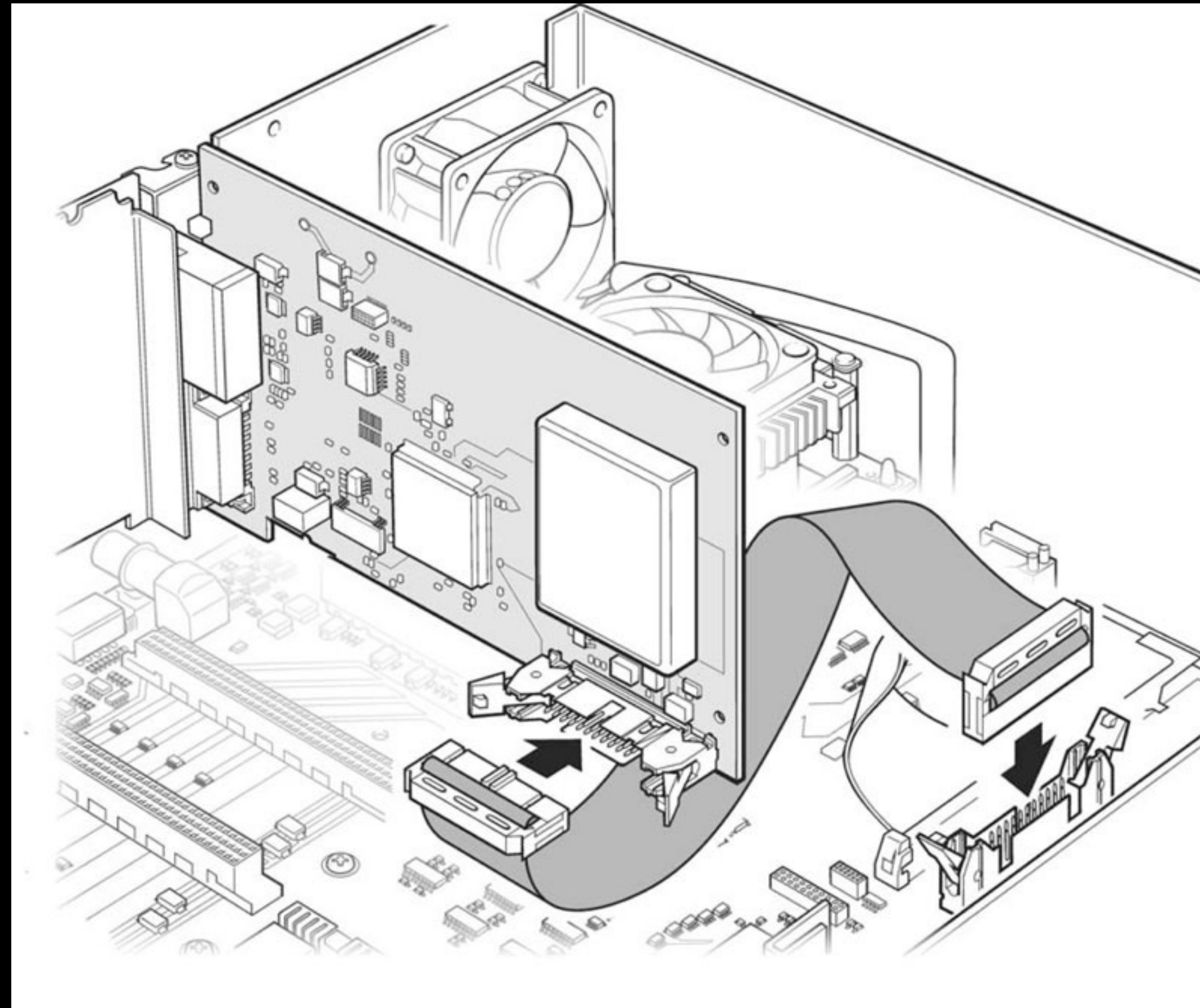
Combine different approaches



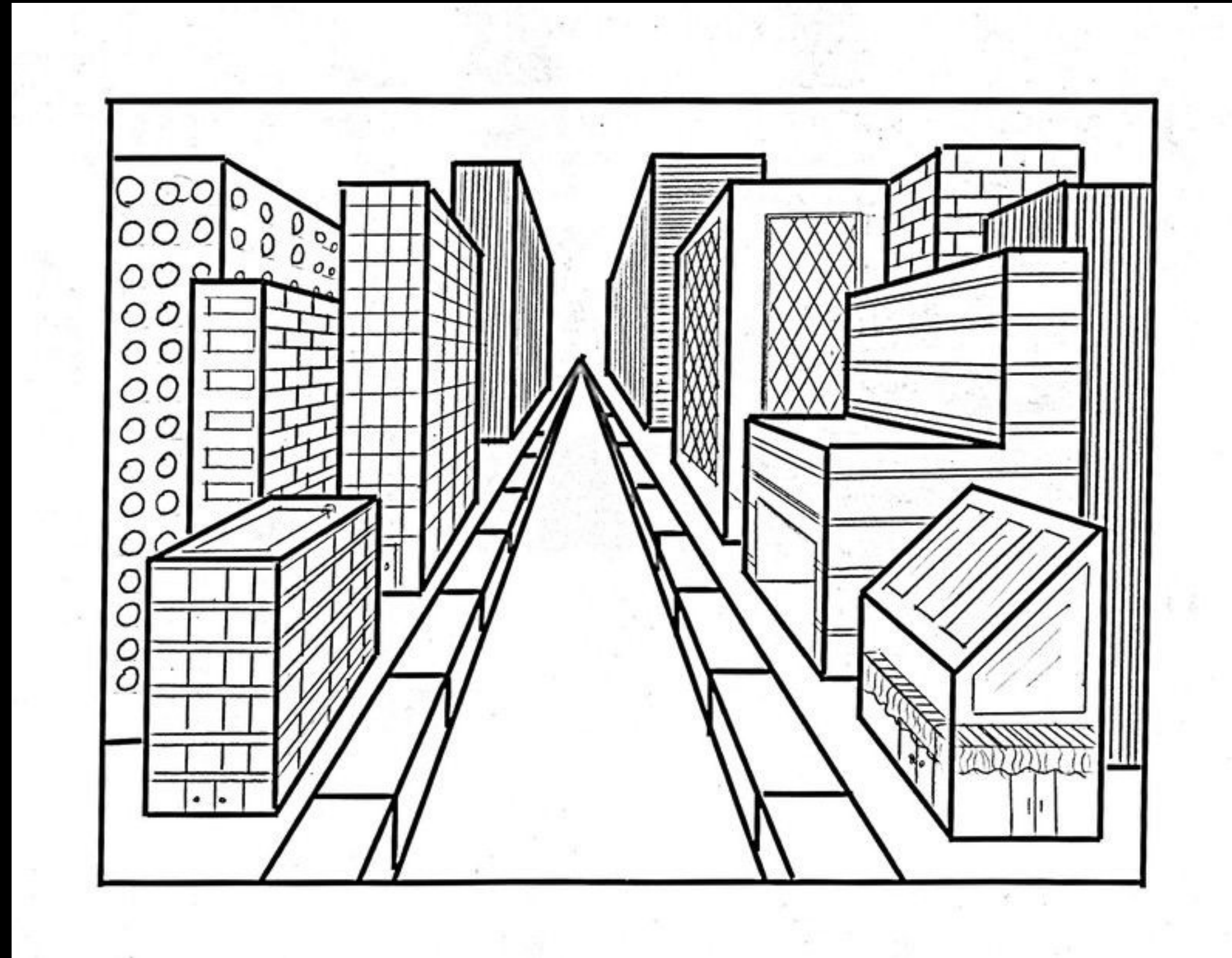
3 Dimensional Perspective



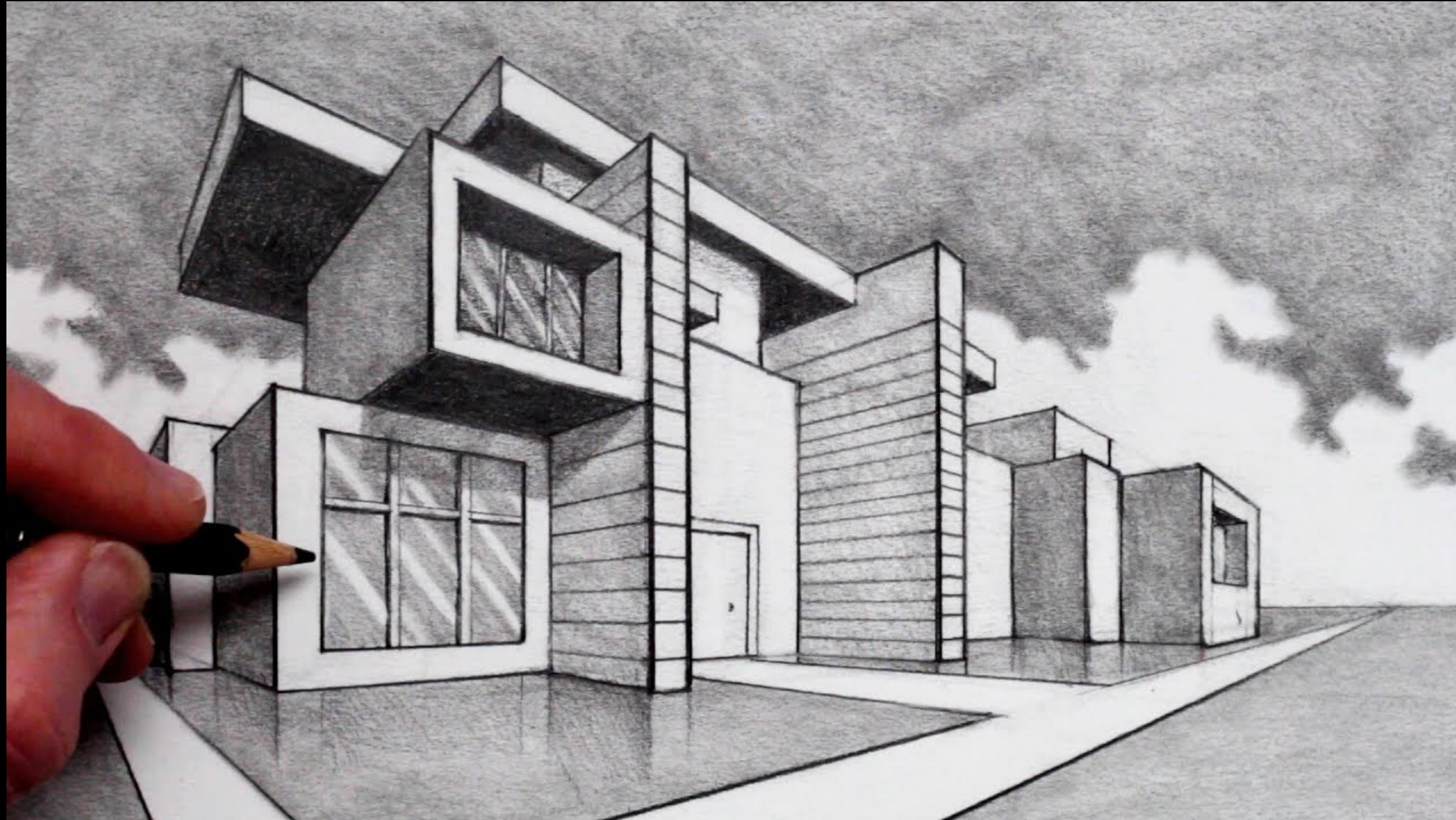




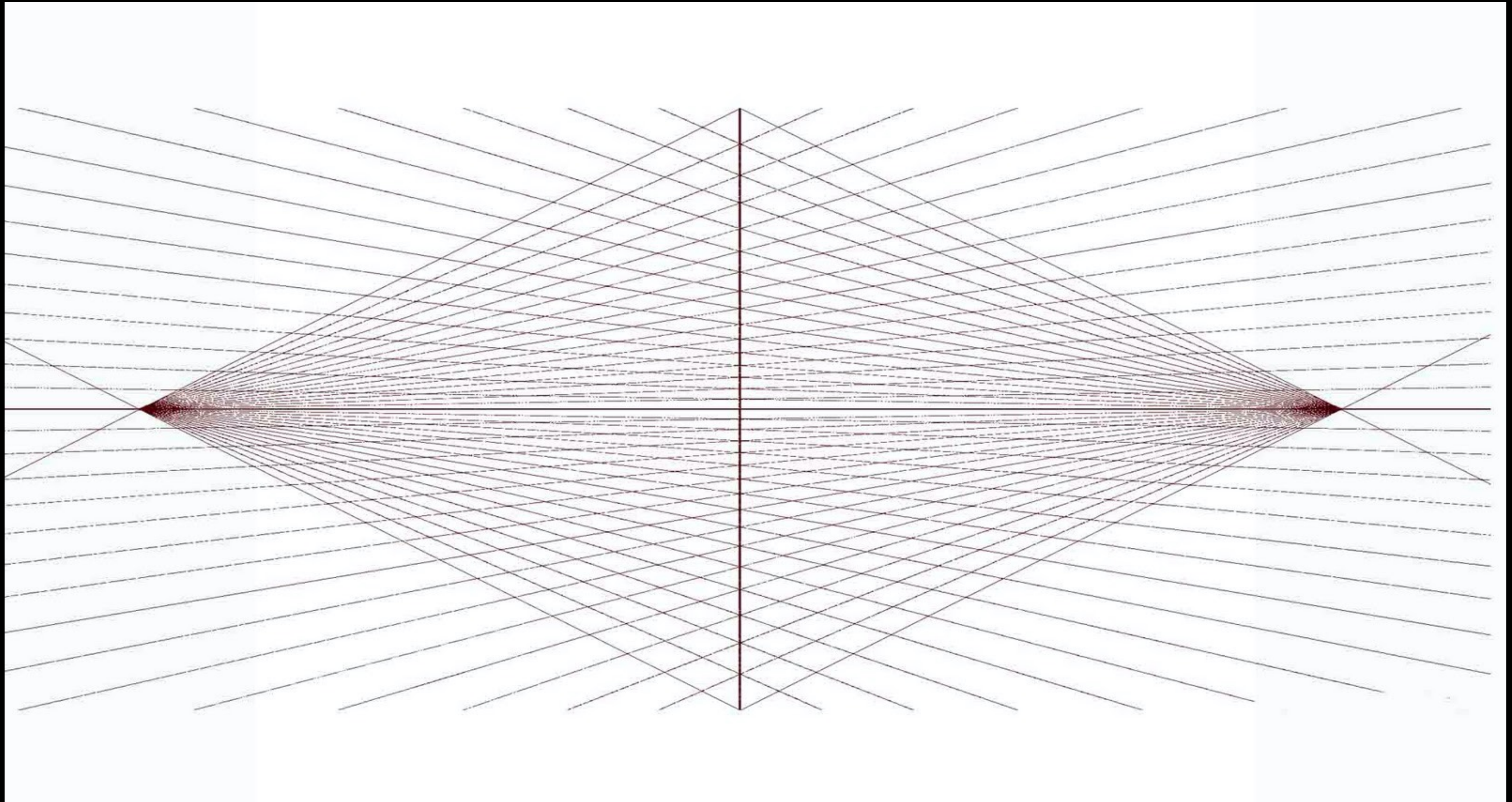
Isometric View



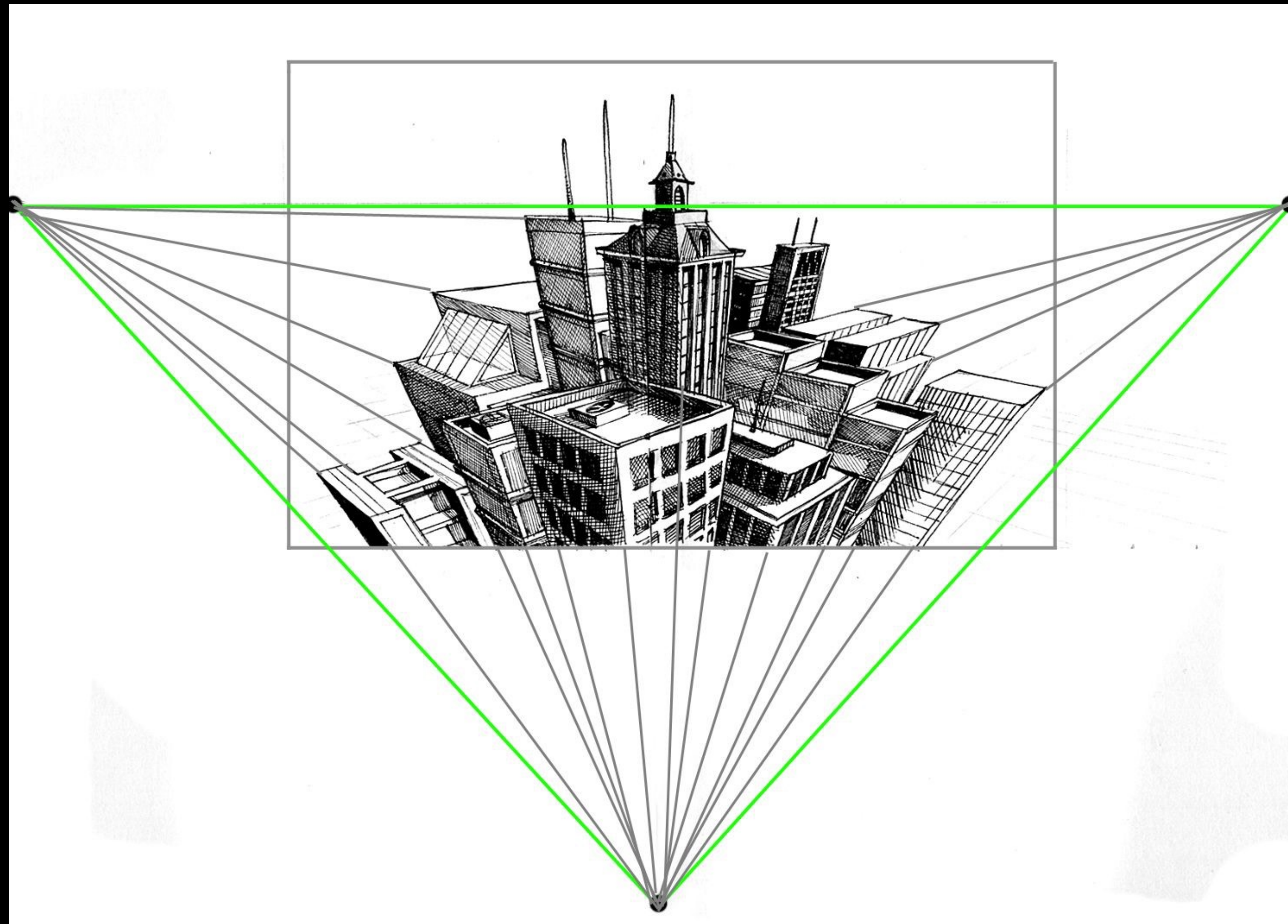
One-point perspective



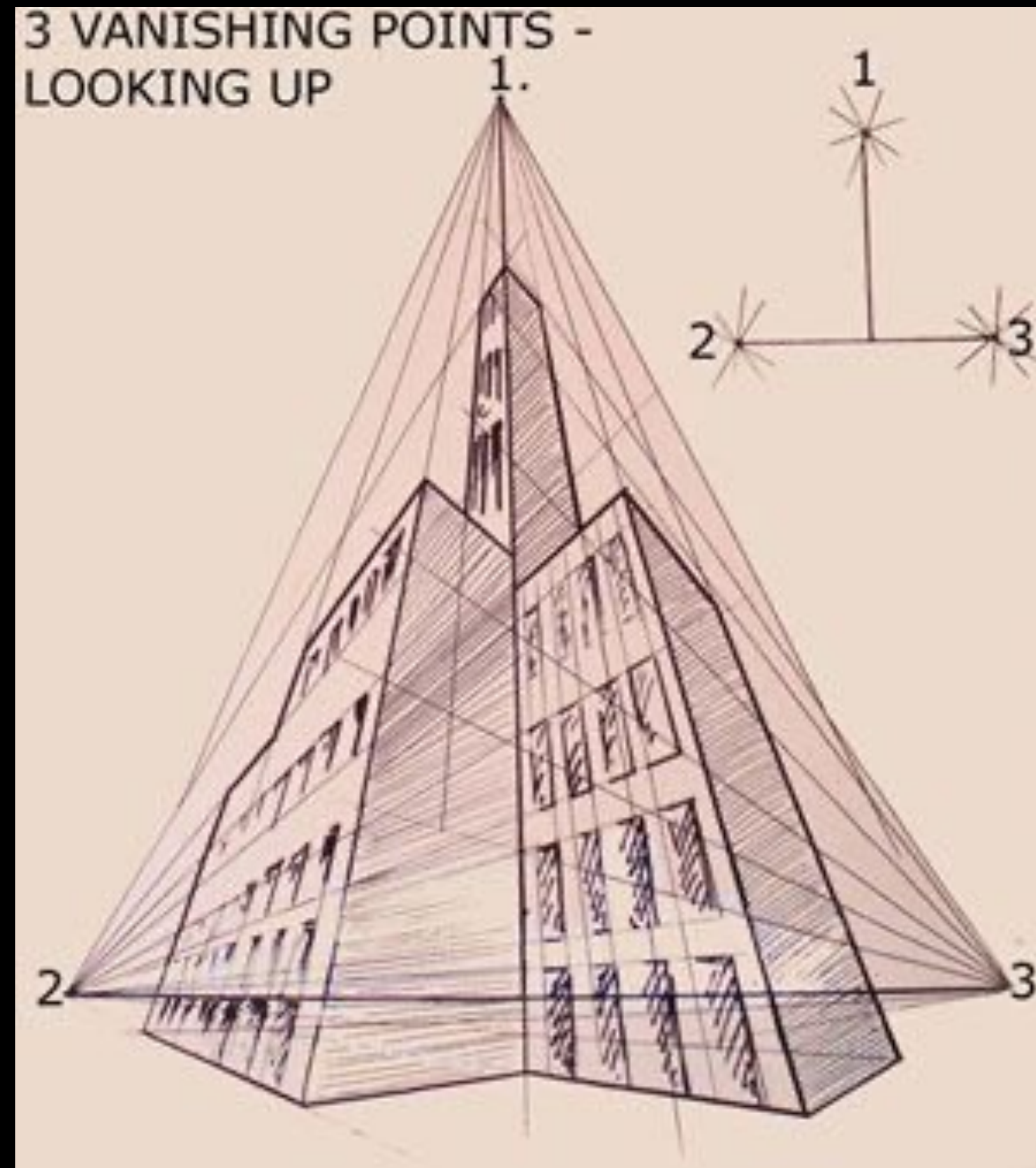
Two-point perspective



Two-point perspective



Three-point perspective



Three-point perspective